

The American Journal of Pharmaceutical Education

**The Proceedings Number
The Fifty-Second Annual Meeting
Buffalo, New York
August 26 to 28, 1951**

**THE OFFICIAL PUBLICATION OF THE AMERICAN
ASSOCIATION OF COLLEGES OF PHARMACY**

The world goes on but its direction and the course it will take in the—at present—unknown future, depends on the lives and endeavors of that portion of our American Youth who have learned to think clearly and live honorably. There is a small verse in that great Book of nature and revelation that should be the rule and guide of our lives, and which gives the answer thus: "What doth the Lord require of thee, but to do justly, and to love mercy, and to walk humbly with thy God."—Dr. Albert W. Claffin, President Rhode Island College of Pharmacy and Allied Sciences, to the 1951 graduating class.

Volume XV

October, 1951

Number 4

INSTITUTIONS HOLDING MEMBERSHIP IN THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

Alabama

Alabama Polytechnic Institute, School
of Pharmacy, Auburn (1905)*
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(L. S. Blake)*

California

University of California, College of
Pharmacy, San Francisco. (1942)
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(Troy C. Daniels, Robertson Pratt,
Donald C. Brodie, E. L. Way)
University of Southern California
School of Pharmacy, Los Angeles.
(1918)

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(Alvah G. Hall, Edward S. Brady,
Margaret Alrston, George Griffen-
hagen)

Colorado

University of Colorado, College of
of Pharmacy, Boulder. (1931)
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(Charles F. Poe)

Connecticut

University of Connecticut, College of
Pharmacy, Storrs. (1935)
Harold G. Hewitt, Dean
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Fenney, Ruth Foden, H. J. Fuller, W.
Kelleher, P. J. Janke, A. E. Schwartz-
ing)

District of Columbia

The George Washington University,
School of Pharmacy, Washington.
(1900)

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(Charles W. Bliven)
Howard University, College of Phar-
macy, Washington. (1936)
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ton)

Florida

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macy, Gainesville. (1935)
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macy, Athens. (1938)
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(Kenneth L. Waters, Woodrow R. By-
rum, Michael Steblar)

Idaho

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(Ivan W. Rowland)

Illinois

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macy, Chicago. (1906)
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Webster, Dwight Deardorff)

Indiana

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Mull, E. J. Rowe)
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cy, Lafayette. (1901)

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L. D. Edwards, E. Ramstad, Paul
Gerding, B. Dunton, P. Belcastro, W.
E. McConnell, R. Mulvey, D. W. Black-
burn, A. Piechioni, R. Patel)

Iowa

Drake University, College of Pharmacy,
Des Moines. (1942)

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(B. E. Benton, C. B. Granberg, A. D.
Marcus)

State University of Iowa, College of
Pharmacy, Iowa City. (1901)

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(R. A. Knever, L. C. Zopf, J. W.
Jones)

Kansas

University of Kansas, School of Phar-
macy, Lawrence. (1900)

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(J. Allen Reese, Charles Peterson, Ray-
mond Happonen)

Kentucky

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(Earl P. Slone)

Louisiana

Loyola University, New Orleans Col-
lege of Pharmacy, New Orleans. (1931)

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(John F. McCloskey)

Xavier University, College of Pharma-
cy, New Orleans. (1933)

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(Lawrence F. Ferring)

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University of Maryland, School of
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Allen, G. P. Hager, Donald Shay, F.
L. Slama)

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Boston. (1900)

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R. S. Kelley, M. W. Quimby, A. J.
McBay, S. M. Best, D. O. Wolff, R.
W. Vander Wyk, J. H. Goodness, C.
B. Gustafson, W. E. Hasson, R. A.
Walsh, R. Duvall)

Michigan

Detroit Institute of Technology, Col-
lege of Pharmacy and Chemistry, De-
troit. (1923)

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(C. H. Waldron)

Ferris Institute, College of Pharmacy,
Big Rapids. (1938)

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University of Michigan, College of
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Monis, Lee Worrell)

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cy, Detroit. (1925)

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(Roland T. Lakey, Melvin W. F.
Dunker, Harold Bailey, R. J. Miller)

*Denotes year institution was admitted to the Association

THE AMERICAN JOURNAL OF PHARMACEUTICAL EDUCATION

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Places of Meeting

1. Richmond, Va., May 8-10, 1900
2. St. Louis, Mo., September 19-20, 1901
3. Philadelphia, Pa., September 12-15, 1902
4. Mackinac Island, Mich., August 3-5, 1903
5. Kansas City, Mo., September 7-8, 1904
6. Atlantic City, N. J., September 5-7, 1905
7. Indianapolis, Ind., September 5-6, 1906
8. New York, N. Y., September 4-5, 1907
9. Hot Springs, Ark., September 8-10, 1908
10. Los Angeles, Calif., August 17-18, 1909
11. Richmond, Va., May 4-5, 1910
12. Boston, Mass., August 16-17, 1911
13. Denver, Colo., August 20-22, 1912
14. Nashville, Tenn., August 20-21, 1913
15. Detroit, Mich., August 25-26, 1914
16. San Francisco, Calif., August 6-7, 1915
17. Philadelphia, Pa., September 1-2, 1916
18. Indianapolis, Ind., August 27-28, 1917
19. Chicago, Ill., August 12-13, 1918
20. New York, N. Y., August 25-26, 1919
21. Washington, D. C., May 5-6, 1920
22. New Orleans, La., September 5-6, 1921
23. Cleveland, Ohio, August 14-15, 1922
24. Asheville, N. C., September 3-4, 1923
25. Buffalo, N. Y., August 25-26, 1924
26. Des Moines, Iowa, August 24-25, 1925
27. Philadelphia, Pa., September 13-14, 1926
28. St. Louis, Mo., August 22-23, 1927
29. Portland, Me., August 20-21, 1928
30. Rapid City, S. Dak., August 26-27, 1929
31. Baltimore, Md., May 5-6, 1930
32. Miami, Fla., July 27-28, 1931
33. Toronto, Canada, August 22-23, 1932
34. Madison, Wis., August 28-29, 1933
35. Washington, D. C., May 7-8, 1934
36. Portland, Ore., August 5-6, 1935
37. Dallas, Texas, August 24-25, 1936
38. New York, N. Y., August 16-17, 1937
39. Minneapolis, Minn., August 22-23, 1938
40. Atlanta, Ga., August 21-22, 1939
41. Richmond, Va., May 6-7, 1940
42. Detroit, Mich., August 18-19, 1941
43. Denver, Colo., August 17-18, 1942
44. Columbus, Ohio, September 9-10, 1943
45. Cleveland, Ohio, September 7-8, 1944
46. Washington, D. C., (Executive Committee, only),
November 8-10, 1945
47. Pittsburgh, Pa., August 25-27, 1946
48. Milwaukee, Wis., August 24-25, 1947
49. San Francisco, Calif., August 8-10, 1948
50. Jacksonville, Fla., April 24-26, 1949
51. Atlantic City, N. J., April 29-May 2, 1950
52. Buffalo, N. Y., August 26-28, 1951

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*Albert Schneider.....	1913-14	Hugh R. Muldoon.....	1937-38
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*Clair A. Dye.....	1921-22	Henry S. Johnson.....	1946-47
*Charles H. LaWall.....	1922-23	Arthur H. Uhl.....	1947-48
*Charles W. Johnson.....	1923-24	J. Lester Hayman.....	1948-49
*Washington H. Zeigler.....	1924-25	Bernard V. Christensen.....	1949-50
Edward H. Kraus.....	1925-26	Hugo H. Schaefer.....	1950-51

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*C. Lewis Diehl.....	1904-06	Earl R. Series.....	1928-39
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*Albert Schneider.....	1912-13	*William G. Crockett.....	1936-37
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*Harry V. Arny.....	1914-15	James M. Dille.....	1938-39
Rufus A. Lyman.....	1915-16	*Marion L. Jacobs.....	1939-40
*Theodore J. Bradley.....	1916-17	Eugene O. Leonard.....	1940-41
*Charles E. Caspari.....	1917-18	Perry A. Foote.....	1941-42
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*Washington H. Zeigler.....	1920-21	*Gordon L. Curry.....	1944-46
*Evander F. Kelly.....	1921-22	William F. Sudro.....	1946-47
Charles H. Stocking.....	1922-23	John F. McCloskey.....	1947-48
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Robert P. Fischells.....	1924-25	Thomas D. Rowe.....	1949-50
		Harold G. Hewitt.....	1950-51

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*Wilbur L. Scoville.....	1901-04	*Theodore J. Bradley.....	1917-22
*Julius O. Schlotterbeck.....	1904-08	Zada M. Cooper.....	1922-42
*George C. Diekman.....	1908-10	Clark T. Eidsmoe.....	1942-47
*Charles W. Johnson.....	1910-13	Louis C. Zopf.....	1947-

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*James H. Beal.....	1900-03	*Charles B. Jordan.....	1923-36
*Henry M. Whelpley.....	1903-05	Ernest Little.....	1936-41
*William A. Puckner.....	1905-08	Charles H. Rogers.....	1941-43
Julius A. Koch.....	1908-19	B. V. Christensen.....	1943-48
*Henry Kraemer.....	1919-20	Joseph B. Burt.....	1948-
Rufus A. Lyman.....	1920-23		
*Deceased			

The National Foundation for Infantile Paralysis has asked The Journal to announce that because the March of Dimes has not kept pace with the march of polio, the Foundation is compelled to enlarge the 1952 drive from two weeks to a full four-week period. The appeal will start on January 2, instead of January 15, and run through January 31. The devastating impact and aftermath of polio in the last three years (of record-breaking incidence) found the Foundation, at the beginning of 1951, pledged to care for a cumulative caseload of an estimated 45,000 patients. In addition, help was sought by four out of five of this year's victims and the numbers are still growing. It became apparent in July that the money raised in the 1951 March of Dimes would be insufficient to take care of the situation. The year will end with a deficit of about \$5,000,000 for patient care expenditures alone. The 1950 epidemic reached its peak in late September, striking 33,361 children and adults, in what proved to be the second severest polio year in our history. Where 1951 will leave us cannot be estimated yet, but the new concept for "normalcy" for incidence is far higher than it used to be.

Mr. O. J. Cloughly, chairman of the Executive Committee of The American Animal Health Pharmaceutical Association, convened his committee on October 8 at the Missouri Athletic Club in St. Louis. The purpose of this meeting was to plan the program for the annual meeting at Kansas City in March 1952; to organize and consolidate the membership program; to consider an annual meeting for the Canadian membership; to plan the Institution of Animal Health Pharmacy courses or seminars in Canada; and to consider a change in the structure and content size of "Animal's Healthmate" (the Association's publication) for greater readers' interest and broader benefit to the members. A membership drive is also being staged. At present there are 390 members. The objective is 500 members by the time of the March meeting. The Association deserves the support of pharmaceutical educators.—Ed.

Officers and Executive Committee 1951-52

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VICE-PRESIDENT

Noel E. Foss.....Baltimore, Maryland

SECRETARY-TREASURER

Louis C. Zopf.....Iowa City, Iowa

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Troy C. Daniels.....San Francisco, California

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Harold G. HeWitt	1953	Storrs, Connecticut
Rufus A. Lyman, Editor		Lincoln, Nebraska
Hugo H. Schaefer, Past-President		Brooklyn, New York
J. Allen Reese, President		Lawrence, Kansas
Louis C. Zopf, Secretary-Treasurer		Iowa City, Iowa
Troy C. Daniels*		San Francisco, California

*Member Ex-Officio, without vote

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Charles Martin, H. H. Cordiner, L. W. Rising.

District No. 8 (Ariz., Calif., Colo., Nev., N. Mex., Utah)

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3. Committee on Activities for Alumni

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4. Committee on Problems and Plans

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5. Committee on Status of Pharmacists In the Government Service

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6. Committee on Educational and Membership Standards

Arthur E. James, Chairman; Ralph E. Terry, John F. McCloskey, E. C. Reif, P. H. Dirstine.

*The first named is Chairman of the Colleges; the second is Chairman of the Boards; the third is the Secretary.

7. Committee on Pharmaceutical Research

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8. Committee on Graduate Study

Earl P. Guth, Chairman; Lloyd M. Parks, F. M. Goyan, Arthur Osol, C. O. Lee.

9. Committee on Curriculum

Stephen Wilson, Chairman; Louis W. Busse, Leroy D. Edwards, Arthur E. Schwarting, Charles V. Netz, Walter H. Hartung.

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B. Committee on Personal Problems

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C. Committee on Emergency Problems

Hugh Muldoon, Chairman; L. F. Tice, E. C. Reif, Roy A. Bowers.

D. Committee on Teachers' Conferences

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E. Committee on Audio-Visual Education

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F. Committee on Constitution and By-Laws

Lloyd M. Parks, Chairman; Heber W. Youngken, Jr., Elliott E. Leuallen.

G. Committee on Functions of the American Association of Colleges of Pharmacy

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H. Committee on Office of Permanent Secretary of A.A.C.P.

Arthur H. Uhl, Chairman; E. R. Series, Hugo H. Schaefer, R. A. Kuever, J. Lester Hayman.

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Noel E. Foss, 1952; B. V. Christensen, 1953; George Webster, 1954.

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Glenn L. Jenkins, 1952; Troy C. Daniels, 1954; B. V. Christensen, 1956.

Representatives to the National Drug Trade Conference
Charles W. Bliven, 1952; Ernest Little, 1953; H. H. Schaefer, 1954.

Representatives to the Druggist Research Bureau
Paul Olsen, Chairman; E. R. Serles, Joseph Goodness.

Delegates to the House of Delegates of the American Pharmaceutical Association
J. Lester Hayman, Voting Delegate; Howard C. Newton, Alternate Delegate; Forest J. Goodrich, Alternate Delegate.

Representatives to the National Wholesale Druggists Association
Earl R. Serles, H. G. Hewitt, Alternate.

Directors of the American Foundation for Pharmaceutical Education
(Representing the A.A.C.P. but elected by the Foundation)
H. C. Newton, 1953; Hugo H. Schaefer, 1956; George L. Webster, 1956; Joseph B. Burt and Louis C. Zopf, Ex-Officio.

Representative to the American Association for the Advancement of Science
Linwood F. Tice.

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Section on Chemistry

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Section on Pharmacy Administration

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Section on Graduate Instruction

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Section on Biological Sciences

H. W. Youngken, Jr., Chairman; M. W. Quimby, Vice-Chairman; Frank T. Maher, Secretary; E. P. Claus, Representative on the Committee on Conference of Teachers.

The American Journal of Pharmaceutical Education

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O'Toole, William C.....	Duquesne University
Prout, William A.....	Medical College of the State of South Carolina
Rising, L. Walt.....	University of Washington
Rist, Walter.....	St. Louis College of Pharmacy
Rivard, W. Henry.....	Rhode Island College of Pharmacy
Rowe, Edward J.....	Butler University
Rowland, Ivan.....	Idaho State College
Sciuchetti, Leo A.....	Oregon State College
Semeniuk, Fred.....	University of North Carolina
Slone, Earl P.....	University of Kentucky
Smith, Albert C.....	Ohio Northern University
Smith, Pierre.....	New Jersey College of Pharmacy
Sonnedecker, Glenn A.....	University of Wisconsin
Sprague, C. Henry.....	Creighton University
Strother, W. D.....	Southwestern State College
Terry, R. E.....	University of Illinois
Valenzuela, Patracinio.....	University of the Philippines
Waters, Kenneth L.....	University of Georgia
White, Alfred J.....	Fordham University
White, Allen I.....	State College of Washington
Wilson, Bernice.....	Wayne University
Wilson, Ralph M.....	Ferris Institute
Wilson, Stephen.....	University of Pittsburgh
Worrell, F. Lee.....	University of Michigan

AAAS PHILADELPHIA MEETING, DECEMBER 26-31, 1951

The 118th Meeting of the American Association for the Advancement of Science, the annual meeting for 1951, will include programs of all 18 of the Association's sections and about 45 participating societies. Focus of the approximately 225 sessions will be Convention Hall, adjacent to the University of Pennsylvania's School of Medicine and its associated hospitals; there will be some meetings in the downtown hotels, especially the Bellevue-Stratford (headquarters) and the Benjamin Franklin (zoologists). Programs of particular interest to those in medicine and experimental biology include:

SECTIONAL PROGRAMS

AAAS Section C—Chemistry: Eleven sessions, including one on Medicinal Chemistry, **December 28**; two on Forensic Sciences, **December 29**; and two on Reaction Mechanisms, **December 26, 27**.

AAAS Section F—Zoological Sciences: A symposium, Estuarine Ecology, jointly sponsored by the American Society of Limnology and Oceanography, American Society of Zoologists, and the Ecological Society of America, **December 30**; a two-session symposium, Sex in Micro-organisms, jointly sponsored by AAAS Section G, the American Society of Protozoologists, American Society of Zoologists, and the Botanical Society of America, **December 30**.

AAAS Subsection Nm.—Medicine: Four-session symposium of Abnormalities of Lipid Metabolism, with special reference to arteriosclerosis, **December 29, 30**; plus a medical scientists' dinner, **December 29**, at which Malcolm Soule will deliver a vice presidential address.

AAAS Subsection Nd—Dentistry: Three sessions, including a symposium on Fluoridation as a Public Health Measure, **December 28, 29**.

AAAS Subsection Np—Pharmacy: Six sessions, cosponsored by the American Association of Colleges of Pharmacy, American College of Apothecaries, American Society of Hospital Pharmacists, and the Scientific Section, American Pharmaceutical Association, **December 27-29**.

AAAS Section O—Agriculture: Four-session symposium, Public Aspects of Soil Science, **December 27-28**.



J. ALLEN REESE

President, 1951-1952

J. Allen Reese

President Reese's ancestors, on the paternal side, originally came from Germany. They emigrated to England. There they intermingled by marriage with the Scotch-Irish. They lived there for several hundred years before coming to America. Dean Reese's grandfather, Richard Lee Reese, crossed the Blue Ridge mountains and settled in Lee County, Virginia, shortly after the war between the states, and there he married Sarah Redwine. Six children came into the family—four boys and two girls. The Dean's father, Lee Emerson Reese was the second child and oldest son. The Dean's grandparents died only six months apart, when the Dean's father was eleven years old and for a number of years Lee Emerson Reese lived with relatives until he became big enough to work in logging camps. At the age of 18 he married Alpha Holmes, the youngest daughter of John Holmes, head of one of the wealthy families in Lee County. The mother was disinherited because of this marriage so the mother and father were thrown upon their own. The father worked at logging, carrying the mail, farming and coal mining. Later he became the county's sheriff and also developed a business. He was the mayor of St. Charles for twelve years. He died in 1944. The mother is still living at St. Charles, Virginia. To this union were born five children, four girls and a boy. The boy was named J. Allen Reese.

J. Allen Reese was born July 2, 1905 at St. Charles, Virginia. He completed high school training at Lincoln Memorial University in Harrogate, Tennessee, in 1921. In the years immediately following, he served successively as a clerk for the Black Mountain Mining Corporation, of Black Mountain, Virginia; as an employee of the Grocers' Biscuit Company of Louisville, Kentucky, and of the Mendell Box Company of the same city; and the Bonnie Blue Coal Corporation of St. Charles, Virginia. In 1930 he was granted the bachelor's degree by the School of Pharmacy of the Medical College of Virginia. During the summers of 1928 and 1929 he was a full time clerk at the Pennington Pharmacy at Pennington, Virginia. In the summer of 1931 he attended the University of Rich-

mond and during 1930 and 1931 he put in 100 hours of work a month as a prescription pharmacist for R. L. Booker of Richmond. During the summers between 1930 and 1935 he was actively engaged in compounding prescriptions in the Out-Patient Clinic and Hospital Pharmacies of the Medical College of Virginia. He was granted the master's degree in 1936 and the doctorate in 1938 by the University of Florida. From 1928 to 1940 he was, successsively, a Student Laboratory Assistant in Biochemistry, Instructor in Pharmacy, Associate in Pharmacy, Assistant Professor of Pharmacognosy and Associate Professor of Pharmacognosy at the Medical College of Virginia, with the exception of three years when he served as Graduate Assistant in Pharmacognosy at the University of Florida. In the fall of 1940 he became Professor of Pharmacy and Pharmacognosy and Dean of the School of Pharmacy of the University of Kansas. He was chosen President-Elect of the American Association of Colleges of Pharmacy in 1950 and installed as President of the Association at the Buffalo meeting in August 1951.

Dean Reese is Director of the Kansas State Drug Laboratory. He is a registered pharmacist in Virginia and holds honorary registration in Kansas. He is a Fellow of the American Association for the Advancement of Science; a member of the American and Kansas Pharmaceutical Associations; holds membership in Rho Chi, Phi Sigma, Phi Kappa Phi, Sigma Xi, and the Masons; was a member of the U.S.P. Revision Committee, 1940-1950; is a member of the A.Ph.A. Committee on the U.S.P. (1955); is Librarian of the Kansas Pharmaceutical Association and a member of its Committee for the Revision of the Pharmacy Laws; and is Chairman for the Colleges in District No. 6, Boards and Colleges.

Dean Reese's researches have been extensive and devoted chiefly to the studies on the assay of Ergot and the effect of storage with various moisture contents on the activity of defatted Ergot.

On December 23, 1944, Dean Reese married Monte Elizabeth Robbins. They have three daughters, ages 5, 3, and 1. Dean Reese's father was a Baptist. His mother is a Methodist. Following the ways of mothers, the Dean is a Methodist. Mrs. Reese is a Baptist and following the ways of mothers, the children attend the Baptist Sunday School.

Dean Reese's decision to enter the teaching field was the result of his association with the late beloved Dr. W. G. Crockett, who he greatly admired and who took him under his wing, so to speak, as a young instructor. Dr. Crockett also encouraged him to do graduate work and further prepare himself for a teaching career.

If any one questions the right of Dean Reese to occupy the highest position that pharmaceutical educators can bestow upon any of their colleagues as an outstanding leader, let him look at the record of the stock from which the Dean sprang and at the record of the Dean's own training, experience and accomplishments. It is a record that even few Presbyterians can match. Under the wise guidance of J. Allen Reese the forward march of pharmaceutical education is in good hands.

RUFUS A. LYMAN

Report of The President

HUGO H. SCHAEFER

Long Island University
Brooklyn College of Pharmacy

Twenty-seven years have passed since this Association last met in this historic and progressive city of Buffalo. Here in 1924, on the banks of Lake Erie and in close proximity to the beautiful and majestic Niagara Falls, we met to discuss problems which have their exact counterpart today. In 1922, a minimum two-year curriculum had become mandatory for member colleges of the Association and in 1923, a resolution was adopted, making the three-year course a minimum membership requirement to become effective in 1925.

The 1924 Buffalo meeting was therefore largely devoted to a discussion of the contents of an adequate three-year course and included an extensive symposium on this subject in which such men as Bradley, Glover, Jordan, Sayre, Washburn, Whelpley, Wulling

and Ziefle participated. That was no doubt a historic occasion in the annals of our educational development, but a reading of their remarks shows that the arguments presented and the objectives sought by those early pioneering pharmaceutical educators have in no way passed into obscurity. They are as cogent and appropriate today as they were 27 years ago. Yes, history does indeed repeat itself and if this were not so we would remain at a standstill. Let us hope that we will approach our present problems with the same foresight and sincerity of purpose as did those men of years ago.

At this meeting we will vote on an amendment to change the requirements for membership in the Association to provide for a minimum collegiate study of five years for a degree in pharmacy. This is an extremely important matter and no doubt all the voting delegates are under instructions from their faculties or boards of trustees. Anything that I might say therefore would be of little import or effect. I cannot refrain from stating that in my considered opinion, an extension of the present college attendance time is a certainty. We may have our doubts as to when we should take such action, but inevitably we will continue to progress in our standards and requirements.

The American Association of Colleges of Pharmacy has served as a dominant force in the advancement of pharmaceutical education for many years and I am certain will continue to do so in the future. First and foremost we are concerned with education, yet we should recognize the fact that the general welfare of our profession itself is the underlying factor which makes it possible for us to adopt higher standards and requirements. We are primarily concerned with training and educating young people for retail service and therefore represent only a small, although extremely important segment, of the broad pharmaceutical field. To insure proper growth in educational effectiveness and prestige, we must have a basically sound profession and our progress is in a large measure directly related to the economy of those concerned with drug distribution.

Director Edward C. Elliott in his Findings and Recommendations of The Pharmaceutical Survey, a project inaugurated at the request of our association, had this to say:

"Professional standards are under the influence of their commercial environment. From this influence have come the five key

problems for the survival of pharmacy as a true profession—the problems of education, of economics, of ethics, of collective self government, and of the relations to other health professions.”

It should be noted that, according to Dr. Elliott, these five key problems have come from and are under the influence of “commercial environment”. I dislike accepting this statement, but we must be realistic in our thinking and recognize the fact that the commercial aspects of drug distribution cannot be ignored if we are to fully develop and energize our educational institutions and our standards. We should not supinely close our eyes to factors which adversely affect any of the various phases which are so closely inter-related and which make up that complex structure which we so conveniently designate by the single word “pharmacy”. The economic structure of a profession will in a large measure determine its readiness and willingness to adhere to a proper code of ethics, to minimize its purely commercial activities and to strive for higher educational standards and requirements.

The past year has seen a number of developments which seriously threaten the economy of the retail drug store. Chief among these are the prescription refill question and the recent Supreme Court decision which in a large measure destroys the effectiveness of our State Fair Trade laws. This is not the time and place to discuss these questions in lengthy detail, but I do wish to stress the vast importance which these problems exert on the success of retail pharmacy and the resulting inevitable impact upon our educational structure. Probably it is not within the scope of our Association activities to concern ourselves with these matters, but I do believe that as individuals we should be fully cognizant of their significance, energetically voice our views and work and strive for a proper and advantageous solution of these problems which so vitally affect the future status of retail pharmacy.

During this past year we were also confronted with a new international situation which brought our country into an active war of no small proportions and which carries with it a continuing threat of serious global consequences. We were thus threatened with a return of war-time conditions, with restrictions on materials and man power, and with the necessity for millions of young people of college age to enter the armed forces. The past year became a year of confusion and uncertainty. The Selective Service

rules and policies were never sharply defined and there were the inevitable delays and divergent opinions in Congress before finally in June a bill was signed by President Truman which extended selective service to July 1, 1955 and provided for the first time in the history of our country the basis for a system of universal military training to become effective at some unspecified time in the future.

The passage of this bill has to some extent given us material for an evaluation of the future. The minimum draft age became 18½ years but men younger than 19 cannot be called until draft boards have exhausted their supply of older persons. Thus it is expected that very few men, if any, will be inducted before their 19th birthday. The maximum age limit is 25 years, but deferred men will be subject to draft until they reach the age of 35. The time of active service is 24 months plus an additional six years to reserve status. A ceiling of 5,000,000 men was established for the combined strength, at any one time, of the Army, Navy, Air Force and Marine Corps.

The long-range features of the law, intended to provide for a permanent system of universal military training will go into effect at some unspecified date and presumably after the present emergency. They call for inductions at the age of 18 for a six-month period of active service and 7½ years in the reserves. The President was authorized and directed to appoint a National Security Training Commission of five members which must, within four months, make recommendations to Congress covering a broad outline for other phases of the program.

It is difficult to foretell how these provisions will affect college enrollments. The law specifies that men in high school, when called for induction, may be deferred until completion of the course or attainment of the age of twenty and also that men called for induction while in college may be deferred to the end of the current academic year. In all other respects the President was given broad powers in granting deferments through the local draft boards. He may set up rules for the deferment of persons engaged in essential occupations in industry or agriculture, as well as students of medicine, dentistry, pharmacy and certain other similar studies deemed essential to national health.

In earlier legislation pharmacy had not been included in this list of occupations and it is gratifying to know that we now enjoy such recognition. This apparent equality of status with that of the other health professions is of no practical significance unless the rules and policies finally adopted, under the powers conferred upon the President, give similar equal recognition. To obtain this, organized pharmacy must be prepared to furnish man-power data and proof of its essentiality as a health profession. Dr. Robert P. Fischelis of the American Pharmaceutical Association ably presented our case before the Preparedness Sub-Committee of the Armed Service Committee of the Senate last January and his report was supplemented with data on pharmacy student enrollment by Chairman Burt of our Executive Committee. The officers of this Association, realizing the great importance of these activities, shortly thereafter called a meeting of the members of the Committee on Emergency Problems of which Dean Hugh Muldoon is Chairman. This meeting was also attended by Dr. Robert P. Fischelis and your president and plans were developed for a practical program of joint action in all matters relating to the broad aspects of student deferment.

Considerable progress has been made in recent years in obtaining a proper degree of recognition of the importance of pharmacy in the services of the several branches of our armed forces. According to the Surgeon-General, pharmacists will be utilized for the following duties in the Medical Service Corps of the Army:

1. Utilizing pharmaceutical training and aptitudes to the utmost, pharmacist officers will be charged with the purchase, examination, shipment, storage and standardization of the drugs and medical supplies required by the Army. They will coordinate the preparation of Supply Tables and aid in preparation of standards of drugs and medical supplies.

2. In command functions, they will be placed in charge of all types of Medical Supply depots as well as subordinate positions in the depot. They will be named assistants to surgeons in battalions and regiments, as commanders of headquarters and medical battalion units, adjutants, medical and general supply officers and laboratory officers in medical and general laboratories.

3. No little part of their future duties will be instructing at training schools. Pharmacy officers will be especially sought in Regular Army commissioned ranks for duty in the postwar Army which will require three officers of their capabilities for every thousand men. It is

thought that additional duties given pharmacists will release other Medical Department officers from administrative duties.

4. Further, the pharmacist will be qualified to serve in multitudinous hospital capacities as pharmacy officer, executive officer, adjutant, supply officer, mess officer, registrar, evacuation officer, hospital detachment commander and detachment of patients commander. They will compound and dispense medicines in units as large as General Hospitals and Hospital Centers.

5. In combat organizations, the pharmacists will assume more authority than ever before. They will serve as medical and general supply officers to medical groups and battalions and command ambulance units.

6. In procurement jobs they will deal with contracts, purchase, inspection, shipment, storage, testing and standardization of medical equipment. Further, pharmacists are playing vital roles in administrative positions in the office of the Surgeon-General.

It should be noted that these duties are largely of a supervisory or organizational nature and have little to do with the actual compounding and dispensing of drugs and medicines. Other branches of the armed forces have announced similar policies and while it is gratifying to know that commissioned pharmacists will be in charge of administrative work, the fact remains that drug dispensing is carried out largely by persons who are not graduates of colleges of pharmacy. They are the so-called "pharmacy technicians" who have had the questionable benefit of a special and extremely short and inadequate course of training usually under direct military supervision.

This condition was recently brought forcibly to the attention of the officers of your Association when in March 1951 the Commanding General of the Air Training Command of the Scott Air Force Base circulated questionnaires to our member colleges for the avowed purpose of establishing courses for pharmaceutical technicians in the Air Force. The instruction was to be offered to men assigned to the respective colleges by the military, and the colleges were to have nothing to do with their selection. The courses were to consist of 480 clock hours of instruction over a period of 16 weeks including a specified number of hours in such subjects as chemistry, general pharmacy, laboratory pharmacy, materia medica and administration and supply.

This entire plan came as a complete surprise to the officers of your Association and in their opinion, sponsorship of a super-

ficial program such as that proposed, would represent a distinct backward step in pharmaceutical education and was not to be encouraged. It was felt that the Air Force, or any other branch of the military, could adequately meet its needs provided (a) they assigned college of pharmacy graduates already in the services to professional duties and (b) they appealed for the enlistment of pharmacists, particularly by the 1951 graduates, with a guarantee of assigning them to pharmaceutical services.

These thoughts were presented to top officials of the Air Force in conference and by correspondence and they agreed to withhold further action on their training plan, in order to give our Association an opportunity to submit the matter to our member colleges and through them to our senior students. The response was indeed gratifying. Questionnaires were sent by Chairman Burt to 75 member and non-member schools and of these, 73 reported that 245 senior pharmacy students would definitely enlist and that 333 others were considering similar action. No exact final figures of the number that actually entered the Air Force are available, but assurance has been given by the latter that its need for pharmaceutically trained men has been met and that plans for establishing short technician courses in our field have been abandoned.

I recommend that we adopt a similar policy for the future, in regard to short and inadequate courses of training for men entrusted with pharmaceutical services in the armed forces. We should cooperate fully with military preparedness plans but must oppose the establishment of such courses until it can be shown that every effort has been made to assign pharmaceutical duties in the armed forces to men of equal training to those that serve our civilian population.

Our colleges of pharmacy are also rapidly responding to the needs of civil defense. During the past year a booklet entitled "Health Services and Special Weapons Defense" was issued by the Federal Civil Defense Administration in which a broad sphere of activity was assigned to pharmacy. In general the Federal plan provides that community health service advisory committees, established by civil defense agencies, shall include pharmacists and that at least two members of all first aid station staffs be members of our profession. The booklet specifically envisages the use of pharmacists in a great variety of assignments intended to free

physicians, dentists and nurses for the care of casualties. It suggests that in localities where medical personnel would be short of the number required, pharmacists could be trained to assist in first-aid services, to administer medications, apply dressings, suturings, and perform minor surgery under the physician in charge.

Many of our colleges have either introduced new courses or modified existing courses to provide sufficiently broad instruction in First Aid to enable graduates to properly assume these new functions and responsibilities. Some have been designated and equipped to serve as First Aid Stations and Hospital Distribution Centers during periods of civilian war-time disaster and mass casualties. Developments in atomic, biological and chemical warfare have created many problems which present a real challenge to pharmacy and our colleges and students should be urged and encouraged to participate in all national, state, and local civilian defense plans.

The American Council for Pharmaceutical Education is today our active college accrediting agency. Shortly after the Council was established we eliminated from our constitution and by-laws most of the provisions for standards of membership. We voluntarily agreed that the inspection of our colleges, the evaluation of physical facilities, of teaching procedures, and of operational effectiveness should be judged and passed upon by the Council. Thus, in a large measure, we changed the original functions of our Association, but I doubt whether we developed those that we retained to their fullest extent.

Without accrediting powers, one of our remaining functions is to serve as a source of advice and guidance to those colleges that seek or need our help. We need not encourage the establishment of new colleges of pharmacy but when this occurs we should assist them in every way to become sound and effective educational institutions and to meet the desired standards. We should also serve in a similar capacity to colleges which fail to obtain an "A" rating from the Council.

It is those colleges that need us most and yet we still retain a provision in our constitution which makes it impossible for a college of pharmacy to obtain membership unless it has functioned as a teaching institution for a sufficient length of time to have its full curriculum in operation.

I therefore propose and recommend that we change our constitution and by-laws to provide for Associate Membership for colleges which are offering a course of instruction, operating on a non-profit basis, offering four school years of instruction or whatever the required minimum length may be and leading to a degree recognized by our Association regardless of the number of years such colleges may have been in actual operation. I also recommend that such Associate Membership be open without any further restrictions to all other non-accredited colleges of pharmacy established on a non-profit basis that meet the requirements for length of course and nature of degree offered. Such Associate Members or their delegates should enjoy the privileges and responsibilities of full membership except the right to vote and to hold an elective officership.

The Council under its present accreditation policy classifies colleges of pharmacy as A, B, C and Y, the latter designation indicating only partial accreditation for newly established institutions. It is the announced policy of the Council to use the B and C classifications for only a limited period of time during which colleges in these groups will have the opportunity of meeting the standards required for the top designation and that thereafter only colleges meeting the requirement of an A classification will be accredited.

Thus under my proposal present membership in our Association would in no way be affected since B and C classified colleges are at present accredited. However, when the final objectives of the Council are eventually attained, full association membership would be limited to those colleges that have an A classification but all others could be Associate Members. This would provide a place within our sphere of influence and activity for newly established schools as well as for the weaker institutions and provide an opportunity for the stronger colleges to extend guidance and advice to those in a less fortunate position.

Two Teaching Seminars have been conducted during my term of office. One on Pharmacy Administration was held in June 1950 in Columbus, Ohio under the Chairmanship of Dean B. V. Christensen and the other on Pharmacology in Lafayette, Indiana under the direction of Dean Glenn L. Jenkins. Both seminars were extremely successful and very well attended. These seminars rep-

resent a service and opportunity for greatly improving our teaching procedures and course content. They have become rather firmly established as a regular part of our Association activities and I recommend that they be continued. I further recommend that we extend a vote of thanks to the American Foundation for Pharmaceutical Education not only for the financial support which it has given us to make these seminars possible, but also for its substantial appropriation toward the cost of our Journal and for providing scholarships and fellowships in our colleges. I feel certain that the Foundation will prosper under the guidance and leadership of its new Executive Secretary, Dr. W. Paul Briggs and will continue to support our Association activities on an even broader and larger scale than it has in the past.

In closing I can state that it has indeed been a pleasure to serve as your President. The duties have not been too arduous largely because of the splendid cooperation and help which I received from Secretary-Treasurer Louis Zopf, from Executive Committee Chairman Joseph Burt, from Editor Rufus A. Lyman and from all the other officers and committee chairmen. To them I extend my sincere thanks. Nevertheless, the fact remains that no group of officers could successfully carry on the work of our Association without the full loyalty and support of every one of our member colleges and their faculty representatives. Such support has been extended during my term of office and for this I thank each and every one of you. Likewise, I wish to express my appreciation for the help which our Association and I received from Secretary Robert P. Fischelis of the American Pharmaceutical Association. I urge and hope that my successor to the Presidency of this Association will receive similar kind understanding and support during his term of office.

RECOMMENDATIONS

1. I recommend that it be the policy of the American Association of Colleges of Pharmacy to discourage the establishment of short pharmacy technician courses in all branches of the armed services; that we endorse the action of the Executive Committee which made it possible for the Air Force to obtain college of pharmacy graduates in sufficient number to meet its technical needs; that similar steps be taken whenever such occasions arise; that we continue our efforts to obtain

recognition in the form of commissioned rank for those entrusted with the performance of pharmaceutical duties in the armed forces.

2. I recommend that we provide for Associate Membership in our association for non-accredited schools of pharmacy.

3. I recommend that we extend a vote of thanks to Dean Glenn L. Jenkins, Chairman of the 1951 Teaching Seminar Committee, and to Dean B. V. Christensen, Chairman of the 1950 Teaching Seminar Committee, for their excellent leadership and organizational work as evidenced by the superior character of the respective seminars and that we make every effort to continue this part of our association program.

4. I recommend that we extend a vote of thanks and appreciation to the American Foundation for Pharmaceutical Education for its financial support of several of our activities and for its scholarship and fellowship grants; that we congratulate the Foundation for its wise selection of Dr. W. Paul Briggs as its Executive Secretary; that we pledge our full and continued support to the work of Dr. Briggs and the objectives of the Foundation; that we urge the Foundation to continue its cooperative efforts with our association in behalf of pharmaceutical education.

Installation Address

PRESIDENT-ELECT, J. ALLEN REESE

School of Pharmacy, University of Kansas

The Association has wisely made provision for a president-elect, giving the incoming president an opportunity to become more familiar with the affairs of the Association by attending the meetings of the Executive Committee and receiving the communications from this body. I am sure this year of apprenticeship has given me a better insight into the problems facing the Association.

The requirement that the newly installed president of your Association present an address is beautiful in theory but, as was pointed out by President Schaefer last year, has inherent difficulties. The recommendations of the president and the president-elect are considered at the same meeting. Since both addresses in a large measure will reflect personal views, it is possible that these

varying recommendations may hinder the consideration of some important problem. President Schaefer and I have been in agreement concerning the affairs of the Association; however, I do not know what he is recommending and neither does he know at the time of the writing of this address what I am recommending. I am inclined to believe that the president-elect should refrain from making recommendations.

Suggested Change in the By-Laws

The Association relinquished its power of accreditation, leaving this important duty to the American Council on Pharmaceutical Education. However, what appeared to be an innocuous By-Law, namely, section 6b of Article I, was included in the new Constitution and By-Laws. This reads, "A College may, with the approval of the Association, be permitted to shorten this time provided additional work is done in a regularly organized summer session in an approved institution and provided further that all the required hours have been completed." This may be interpreted to mean that permission to accelerate must be obtained from the Association and the policing of the quality of summer session work lies in the hands of the Association.

The standards of the American Council on Pharmaceutical Education contain no reference to acceleration and the Council has not expressed an opinion one way or another. During the past year the Executive Committee of the Association refused to give permission to accelerate to certain colleges which asked for it. Hence the stand of the Association and the Council are not identical. This causes an embarrassing situation. I am opposed to acceleration but since the Association has given over the inspection and accreditation of colleges to the Council, it seems to me that this troublesome section should be deleted from our By-Laws.

Professional Accrediting Agencies

Accrediting agencies, particularly in the field of professional education, have been attacked during the past year. This is nothing new except that the attacks have been more outspoken and vigorous. At the annual meeting of the Boards and Colleges of District No. 2 in February, Irvin Stewart discussed accreditation and the universities. He pointed out some of the dangers of an accrediting agency, particularly from the viewpoint of a university

administrator. His remarks pertaining to the field of Pharmacy should receive careful thought. One of his comments, however, shows a lack of familiarity with the field of Pharmacy. I quote, "The fourth and final point to which I should like to invite your attention relates to instruction. The 'Standards' state, 'A College will be expected to give evidence of its efforts to make instruction effective. In judging the excellence of the instruction as given, the Council will concern itself mainly with the following: 'Recognition of effective instruction by the administration; extent of supervision over instruction, student scholarship, examinations and grades, and alertness of the faculty!'"

And then Mr. Stewart states, "To me, this is one of the most amazing statements in the entire document. Every university administrator recognizes the difficulty of judging the effectiveness of instruction. In pharmacy, you have one made-to-order criterion of effectiveness. It is the one which is most directly related to the stated purposes of the college, emphasized as the first of the standards of accreditation. It seems to me elementary that a major criterion of the effectiveness of instruction in pharmacy is the success of pharmacy graduates in passing the examinations given by the state boards. Yet that factor is completely overlooked in favor of the maze of detailed specification of internal administration which is characteristic of the 'Standards to be Used as the Basis of Accreditation of Colleges of Pharmacy.'"

Our state boards have a definite and valuable purpose in seeing that our graduates are safe to practice the profession of pharmacy. Our boards should be qualified to examine the candidates in certain technical aspects of the practice of pharmacy. However, they are not qualified to pass on the educational attainments of our graduates and the members of the boards of pharmacy with whom I am associated willingly admit this fact. They are not qualified, for example, to pass judgment on courses in pharmaceutical chemistry, accounting, etc., yet they readily admit that such courses should be included in the training of a pharmacist. I believe most state board members realize that their function is not one of accreditation of the educational program of the colleges.

For us to use the passing of state board examinations as a criterion of the effectiveness of instruction in pharmacy would be reverting to cram and trade school instruction.

We should not lose sight of the many contributions that accreditation procedures have made to the present standards in the field of pharmaceutical education. Many of the measuring devices may need revision but when these changes are made, they should be directed toward the improvement of pharmaceutical education.

The Teaching Seminars

From the reports which I have received, our Teaching Seminars have been big successes. The teachers of pharmaceutical chemistry and pharmacognosy are asking for one devoted to their own specialty. There is also demand for a seminar devoted to general and modern teaching procedures without regard to their application to any one subject or division of subjects. Dr. Elliott has suggested that the 1952 seminar be devoted to the question of laboratory procedure and teaching techniques. There does not seem to be any doubt about the value of continuing these seminars, the only question being what will be considered next.

I believe these seminars accomplish certain things that our teachers' conferences do not. There is a certain amount of divided interests at our annual meetings and so little time for the conferences that the seminars have a distinct advantage in singleness of purpose. More time and thought can be devoted to these annual seminars. I am not recommending any change in the teachers' conferences but I hope every effort will be made to assure the continuation of the annual Teachers' Seminars.

The Finances of Our Association

From every quarter there is a demand for the Association to increase its activities: officers of the Association should attend the district meeting; officers should attend meetings in Washington and New York; more funds should be available for the various committees; the Association should prepare a roster of teaching personnel; we should have a library of films; literature for the use of the colleges should be prepared. The cost of printing the Journal is five times what it was in 1937.

As Dr. Lyman stated in the April number of the Journal:

"It is no exaggeration to say that the work and the responsibilities of the Chairman of the Executive Committee and the Secretary of the Association has trebled in the postwar years. Fortunately for the Association, the Chairman is so located that the

university which he serves also supplies the Association with a vast amount of clerical and stenographic service. The probabilities are that the office of the Chairman will long be so favored. But this is not so in the case of either the Secretary's office or that of the Editor of the Journal. In both instances it has been most difficult, on a part-time or an hourly basis to obtain efficient office assistance to satisfy the essential demands."

The proposal before the Association to double the annual membership fee of the colleges will not enable the Association to increase its activities to the extent that many desire. These funds may be sufficient to carry on the essential activities.

The recommendation last year of President Schaefer of studying the advisability of setting the dues in the Association on a sliding scale based on the size of the enrolled pharmacy student body seems entirely fair. When I discussed this proposal with several deans, the consensus of opinion seemed to be that university administrators would oppose such a plan. In my own university, the plan was considered not feasible because of the impossibility of preparing a budget based on a fluctuating number of students. It seems to me that the expedient thing to do at the present time is to increase the annual dues of the colleges.

The Proposed Five-Year Program

It would be presumptuous of me to believe that I could influence your opinion on this proposal at this late a date. Nevertheless, there are a few things I should like to say if you will bear with me. In my discussions with practicing pharmacists I have heard considerable opposition expressed to an extended training period in Pharmacy; yet I have been amazed at the lack of opposition to more general education for the members of the profession. The opinion seems to predominate that pharmacists should be better educated in order to maintain their rightful place in the community and to properly utilize the information at their command. Many, if not the majority, feel that if additional technical or scientific information is desired it could be obtained at the graduate level. This also represents my belief. I am strongly in favor of two years of general education followed by three years of professional education.

In my opinion there is an advantage in two years of pre-pharmacy that deserves careful consideration. Our professional staffs are relatively small and can do a better job if there is a better selection of students. The pre-pharmacy years can eliminate many who would never be able to pursue a professional pharmacy course satisfactorily. In my school the mortality rate of those who have had two or more years of college work is much less than those entering pharmacy directly from high school. We have found that a satisfactory college record is a better indication of the student's possibility of completing the pharmacy course than the battery of entrance tests given to all applicants.

Some concern has been expressed about the effect of the five-year program on graduate instruction in Pharmacy. With strong graduate programs being developed to meet the demand for people with advanced training in Pharmacy, there is reason to be concerned about the possible curtailment of promising candidates. The strong possibility that the number of students desiring graduate work might diminish was the biggest objection my faculty had to the proposed six-year program leading to the degree of Doctor of Pharmacy. However, our graduate faculty expressed little concern in this connection with a pre-pharmacy program followed by three years of professional education. Most of our possible candidates for graduate degrees are required to take certain undergraduate courses in order to become candidates for advanced degrees. This should not be true with the five-year program in operation. In addition to this we should want only superior students to enter the graduate field and only those who are willing to do more than the minimum.

The real concern in connection with graduate enrollment in Pharmacy as I see it lies in the possibility of a four or five-year integrated program, which would discourage many excellent students with two or more years of college work. I oppose an integrated program for other reasons which I shall not burden you with at this time.

Bachelor of Pharmacy Degree

There is the question of the degree to be conferred when a five-year program goes into effect. The Bachelor of Science degree is awarded in our universities for the completion of four

years work, and is generally recognized as representing the completion of a four-year program.

Dean Dirstine has suggested the Bachelor of Pharmacy degree and I am inclined to agree with him. He says, "I am not in favor of the Doctor's Degree for this five-years course, because it would nullify all of the advanced training that good Schools of Pharmacy have introduced in the way of Ph.D.'s to establish a high standard of scholarship on the part of the faculty.

"The most logical degree that I can think of is the one that we have adopted here; namely, the Bachelor of Pharmacy degree . . ." He further states that it is in good company since Education, Architecture, and Civil Engineering are using it for five-year programs. The Bachelor of Laws is also a well recognized degree.

In my opinion the use of any of the well recognized graduate degrees would be in poor taste and I believe we would do well to consider the awarding of a Bachelor of Pharmacy degree for the completion of a five-year program.

Recommendations

I recommend that:

1. Section 6b of Article I be deleted from the By-Laws.
2. That we continue the annual seminars and direct the Executive Committee of our Association to use every effort to assure their continuation and proper financing.
3. That a statement be introduced in our By-Laws under Section 6 of Article I permitting the awarding of the Bachelor of Pharmacy degree for the completion of a five-year course in Pharmacy.

In Conclusion

In closing I wish to thank the members of the Executive Committee for their tolerance and assistance during the past year. They have indeed been most kind and helpful. I realize that your President, except in routine matters, may act only in cooperation with the Executive Committee.

The confidence and trust which the members of this association have placed in me by making me your President is an honor to the school I represent. I shall attempt to carry out the functions and duties of this office in such a manner as to justify this confidence.

The University and Professional Education

G. LESTER ANDERSON

Dean of Administration, The University of Buffalo

As someone has remarked, it is fashionable these days for college and university faculties to be studying and revising their programs. And it has become almost a cliché to orate that the challenges of these times demand a reconstruction of higher education. However, notwithstanding the irritation that the rugged and imaginative college professor may often rightly show toward contemporary education fashions and his indifference to cliché-filled harangues that he do something about the college curriculum, current educational ferment is underway and most rightly so.

Great debates are waged over the proper nature of liberal education. Hutchins and his proponents seem to want us to return to the wisdom of the past as the basis for contemporary education. Many others, following such leaders as Harold Taylor, T. R. McConnell, and Sidney Hook, while not denying the values of historical perspective, feel that the contemporary world has created its own unique problems and education to be relevant must come to grips with these problems with resources and insights that are themselves contemporary. James Grey, in writing his history of the University of Minnesota, titles one chapter "Revolution in the Arts College". This phrase is perhaps appropriate to describe what has been going on in many Arts Colleges all over this land.

Professional education has been somewhat slower perhaps to experience educational ferment. But only causal thought causes us all to acknowledge that professional education underwent not only tremendous expansion but also tremendous change in the first half of this century. And if I may venture a prediction (these are always cheap to make), the second half of this century will produce not only further expansion but as profound change in professional education as the first half century produced. But, I repeat, professional education has not been without its own soul searching and has not been oblivious to the multitudinous cultural pressures of

*Address Delivered at the Joint Banquet of the American Association of Colleges of Pharmacy and the National Association of Boards of Pharmacy August 27, 1951 at the Buffalo meeting.

the half century just terminated. Medical education perhaps saw itself most drastically shaken-up as a result of the Flexner report of forty years ago. Today—and in part because of its relatively early and somewhat drastic reconstruction—it is probably the most professional of all the professions in both practice and education. But medical education is even now experiencing further more subtle but persistent reform. It is aware that its high specialization has left it wanting in terms of service that only the general practitioner can seem to perform. It is facing the problems of integrated general training. It also realizes that while it has established itself on the necessary and firm bases of the natural sciences as disciples of knowledge, it has neglected to come to full understanding of the patient to be served as a human being. Therefore, it is broadening its bases to include psychological and other social disciplines.

The other health professions, law, teacher education, and engineering are likewise maturing and changing; and new professions such as journalism and social work are rapidly coming of age and effecting fully professional programs of education. In all of this ferment, pharmaceutical education has found itself involved. I have noted in my reading some of the land marks of your own study of your own professional and educational problems, and have noted particularly the publication of your recent survey. But of this I will say more later.

It would be interesting and profitable to discuss the implications of the contemporary world situation for the universities and for professional education. But that should be the subject of a symposium. Our assumed assignment is a much more modest one, although still perhaps too broad in scope. None the less, it is still valuable to see a problem in molar perspective. Let us then establish our frame of reference.

The faculties of the universities and their constituent professional schools share jointly with the members of the organized professions the continuous responsibility to evaluate education for the professions, to reformulate their purpose as the changing social scene and technological advance requires this, and to provide the resources and facilities for achieving these purposes.

I come to you, obviously, as we discuss the education of pharmacists, only as a responsible member of a university faculty. I do have membership in the profession we call teaching and have devoted some dozen years of my life to the preparation of young people for service as teachers. But, as will perhaps be all too obvious, my associations with pharmaceutical education have been meagre and it is as a member of a university faculty and a university administrative officer that I speak.

In recent weeks I have been reading more extensively the publications in professional education with particular reference to pharmacy. Aside from the background it afforded me for these remarks tonight, I found the GENERAL REPORT OF THE PHARMACEUTICAL SURVEY, which I mentioned a few moments ago, a most interesting document as it provided insights into general problems of professional education, e.g., the problems of supply and demand and the distribution and extent of time for training, and as it afforded insight that any citizen should possess concerning the procedures and problems of this important profession among the health professions.

Tonight we wish to present two theses. Both, it seems to us, have implication for the education of the pharmacist.

First, through the long years of the development of professional services—through centuries, in fact—and through equivalent years of practice in professional education, the nature of professional service and professional education have been clarified. Out of this clarification have come criteria that test the status of any occupation that claims itself professional. In turn any occupation, let us say pharmacy, that *assumes* itself a profession as it plans its mode of service and the education of its neophytes, must look to these criteria for guiding principles for its present and future development—at the level of education and at the level of practice.

Second, professional education can not be carried on in isolation from the general education provided in the university without grave risks that it will cease to be professional. President Conant has said, "Professional education by itself results in nothing but a trade school." This is the risk that is run. Professional education ought to be conducted not just in geographical proximity or in administrative harmony with other units of the university—particu-

larly those concerned with general or liberal education—but within the intellectual ferment, as part of the common educational enterprise, of the total university. This is because the role of professional education in a university is not paramount for any student; rather, it is coordinate with the roles of the university to advance knowledge and to provide in Conant's words a "general education of the leading citizens". The professional man is a leading citizen, he can be no less and serve in his profession. Consequently, the university faculties and the members of the professions share in a common concern that the professional man be educated not only professionally but also generally.

The Chancellor of the University of Buffalo in his inaugural address a few months ago spoke these words: "The University has an obligation to engender in all of its students—those in the professional schools and in the preprofessional curricula, as well as those continuing in the College of Arts and Sciences—an understanding and appreciation of the ideas, the institutions, and the values which are the background and the substance of a free society."

Consequently, when we discuss the nature of professional education in the university, we must consider the education of the professional man as a professional and as a man.

Let us then answer first the question: What makes an occupation a profession? The answer to this question should provide certain basic guide lines for education for the professions. I would propose the following criteria as determining a profession.

In a profession, the control of the training or education of the professional practitioner and the determination of the standards for his practice rest with the members of the profession itself.

Correlated with this criterion is a second, that the profession establish and enforce a code of ethical behavior for its members. This code will be postulated on the assumption that the prime responsibility and chief motivation of the practitioner is to render service—according to the best connotations of the word—to the members of the society served, and that individual welfare of the professional member is secondary.

A third criterion is that the practice of a profession is basically an art—that it transcends the performance of skills and use of techniques; it is more than craftsmanship. Two conditions determine the degree to which this criterion is satisfied, and become sub-

sidiary criteria. First: the practice of the profession is based on relative mastery of a body of knowledge that has been derived through scholarly activity. This knowledge is more than knowledge of skills or techniques or of information empirically derived. It results from organized, systematic, disciplined intellectual activity—often of the character of research. Second: the professional practitioner is required to make judgments. He must bring to bear his own intellectual processes, as well as his knowledge and his skills, upon his problems; there are no pat formulae that become automatic solutions for professional problems.

You will perhaps recall the statement concerning pharmacy as a profession as it appeared in THE PHARMACEUTICAL SURVEY. The director of the survey wrote that "... it has been assumed that there is a *profession* of pharmacy. That is to say, as with other traditionally recognized professions, those legally admitted to the practice of pharmacy have been qualified therefore by a more or less prolonged period of specialized, advanced study in an institution of higher learning, by fulfilling the requirements of assumptions of personal liability for professional acts. Furthermore, as professionals, pharmacists are obligated voluntarily to accept and to observe codes of technical performance and individual conduct developed through the years."

It seems to me that this statement deals too much with *means* rather than with *ends* to be definitive concerning the nature of a profession. But it does imply most of the criteria which we have suggested as defining a profession.

If, as the survey staff did and as we are most willing to do, we are to assume that there is a profession of pharmacy, then it must satisfy the criteria that determine the class of occupations which are to be considered professions. Assuming a profession of pharmacy then, the criteria become guide lines for the education of the professional pharmacist and for his behavior after he begins his practice. We here this evening are considering only his education.

Translated into more specific terms for pharmacy education, our criteria, if accepted, would imply the following:

(1) The practicing pharmacists (including those in research and teaching as well as in dispensing) become the source of wisdom in improving pharmaceutical education. No other group, including college

faculties and college deans, can speak definitively about the pharmacist's education. The college faculties can serve in a consultative way. They may be useful in suggesting effective means toward accomplishing ends. They can bring technical "know-how" as investigations or research into the character of pharmaceutical education are made. But the essential wisdom resides in the practicing pharmacists group. The pharmacists must do more, however, than bring wisdom to the problems of professional education. They have responsibility. It is their responsibility to see that the professional education of the pharmacist is relevant to contemporary demands. They must be the prime movers for its continuous improvement.

(2) The pharmacists themselves determine the standards for practice. This is accomplished through licensing examinations. It is a well established educational generalization that when examination systems are established for purposes of licensing or certification they become powerful determinants of the educational program. They determine criteria for selection of students for a program. They determine curricular. They effect methods of instruction. Boards which license must realize their power. They must act responsibly and in harmony with the purposes of other segments of the professional group who have other problems to resolve. I cannot speak for pharmacy, but for several of the professions it often seems that there is considerable lag among the licensing bodies in that they are behind best current thought and practice as they set their examinations or other standards which determine who will practice. I know that standards for teacher certification are often out-of-date and often thwart the improvement of teacher education curricula. It is the responsibility of the entire profession to see that the segment which represents them on licensing boards does not become a block to progress.

There should be close liaison between educational institutions and examining boards. This liaison works to the mutual advantage of each. Through such liaison, examining boards have their best assurance that their standards and procedures are relevant to contemporary professional education and activity. Educational institutions in turn will be more realistic (do I dare say practical as well as theoretical?) as they carry out their work.

(3) The motivation of the professional worker for a life of service is basic to the maintenance of professional status for an occupation. The pressures of our society are for us to weaken in our life commitments from this high standard. This is a moral problem. I noted with interest and satisfaction this statement in your survey report: "After all has been said and done, it may be concluded that the outstanding factor determining the future of the profession of pharmacy is fundamentally moral in nature. The profession must contain a far greater propor-

tion of members who are every sharply jealous of the high reputation of the profession and who by energetic cooperation are determined ever to protect that reputation."

The professional members obviously will transmit their convictions about the nature of their work to the constant stream of pharmacy graduates who are fed into the profession. That is, by example, the profession educates its new members as to their responsibilities as they come on the job. But the kind of education given in the university and professional school will also have profound influence on how the pharmacist views his work. Is he in it merely to earn a living? Will personal welfare be his highest motivation? Or, will he recognize personal responsibility to be a servant of humanity? It will be the university's responsibility, directly and more subtly, to lead the young potential professional worker to see his life of work in the scheme of things, to recognize his moral responsibilities, and to arrive at a set of guiding moral or ethical principles that will govern him in his professional conduct.

(4) The fact that the practice of a profession is an art that transcends craftsmanship differentiates professional education from mere job training. As we have already stated, two things are essential in professional education. First, professional education requires relative mastery of a body of scholarly knowledge. Second, professional education transcends knowledge. It is application of knowledge which involves judgment.

You are more aware than I how much knowledge a pharmacist has to have. But as I read, or perhaps I should say, scanned the report *Basic Material for a Pharmaceutical Curriculum* I realized how much the pharmacist needed to know. But a profession can never assume that its body of knowledge is static. It is continuously added to by scholars—in your field, primarily through scientific research in which many talents in diverse fields are at work. The young professional worker must attain relatively high mastery of this body of knowledge. He must also be so educated that he never ceases to learn as more and more becomes revealed that he should know. Perhaps every occupation faces this problem. But the professional man, closest to the researcher who is our chief source of new knowledge, faces it most acutely and with most disastrous results to society if he fails to keep up.

Professional knowledge derived through scholarly investigation always rests on theory. If it does not, it is merely empirically

derived. Empirical knowledge, while often to be trusted and the chief ingredient of common sense, is insufficient to establish the basis for a profession. Consequently, pharmaceutical education must always be alert to guard against educational programs geared only to surveys of contemporary practice. Almost all professions at one time or another are challenged—at least at the training level—as becoming too theoretical. The pressure is to become practical. But the errors run the other way. The lack of the practical in the educational program can often be compensated; it is seldom that failure to be grounded in theory can be overcome. Let me hasten to add that a complete program balances theory with education for solution of the day to day problems. Theory is always to be tested in the field. Professional schools are continuously working to increase the insights of students and to bring them to functional competency by the use of such devices as the clinic and internship in medicine, the case work approach in law, business, and social work, or practice teaching in education. Pharmacy has its devices also, including the practical experience requirement for licensing. But I sound the warning that when professional education ventures far from grounding its students in theory it ceases to be professional education.

The practice of a profession is more than rote application of knowledge and skill. The Dean of the Harvard Graduate School of Business has spoken as follows: "Whenever any member of any profession practices his profession, he is an artist. He must be prepared to call upon all the scientific knowledge which is applicable in any situation he faces. But deciding what scientific knowledge is applicable is an art."

The phase of professional education which produces the artist practitioner—and by that we mean one who can make judgments—is far more difficult than imparting requisite professional knowledge. The abilities involved in judgment are apparently subtly acquired. Of course, considerable native intelligence is a prerequisite. But the abilities that actually operate seem to come as one has only extended experience in the field under consideration. The person making judgments must call up all seemingly relevant information and then choose that which is truly relevant. He must analyze then synthesize. He must differentiate then integrate. He must not procrastinate, but must act decisively.

It is perhaps these abilities that those who plead for more of the practical in professional education are seeking to achieve. Knowledge and theory alone are certainly not enough, as we have already acknowledged. The professional schools must continue to seek the best balance between the work in the classroom and laboratory and the work in the field. In the health professions and in some others those who plan programs that give practical experience at the judgment level face a somewhat awesome difficulty, actually a dilemma. I refer to the situation of those professions which directly serve or deal with human beings. These professions have a great responsibility not to do injury to the persons served. They must respect the integrity of these persons—they are not laboratory animals. Consequently, there is inevitable reluctance to let the student-in-training work at a judgment level with clients. Yet it is only as the neophyte has experiences with clients that he attains professional maturity. Perhaps this is not a serious problem with pharmacy and again it may be. The solution seems to me to rest in a slowly paced, carefully supervised, and continuous induction program beginning with the earliest year of professional education of the potential professional into the realities of the professional art. The key points are that much time spaced over the years plus continuous supervision are required.

I would also suggest that the abilities that compose the art of making professional judgments are seldom developed in programs that sacrifice breadth to depth. I would insist that this breadth is necessary both within the profession and outside it. Explicitly, it comes better when the professional man has wholeness. And breadth is never accomplished without relatively abundant time.

In this section of my discussion I have asked for professional education that never neglects mastery of basic knowledge and sound theory. I also ask for education that nurtures the abilities involved in making judgments. This requires education that complements knowledge and theory with experiences in the processes that the practitioner exercises as he does his daily work. I have asked for breadth of training. And lastly, I asked for a broad general education.

This then brings me to the second major thesis that we proposed earlier, namely, that the professional man must also be educated to perform the responsibilities of a leading citizen. You will

note the assumption involved, that is, that the professional man *does have* special responsibilities as a member citizen of the society of which he is a part.

It seems to me that the pharmacist is unique in the role he plays in society. I read and am told that ninety percent or more of the pharmacy graduates accept positions in retail drug stores. Probably all aspire to have a store of their own and many will achieve this. These men, either as store employees or as store owners have membership in two societies—that of professional men and that of business men. I have been unable to think of any other professional group that would have anywhere near as high a percentage of its members who serve in the dual capacities of professional men and business men.

I do not believe that we are being snobbish or anti-democratic to claim that the university-educated should play a special role in our society as leading citizens. A democracy cannot be leaderless. Each community must have its leaders. The smaller and larger societies turn to those of their members who carry heavy responsibilities in business and professional life to lead them in the conduct of their social, civic, and cultural life. These men will serve on town councils, and in other governmental elective and appointive offices. They will serve on boards of education, social welfare councils, community chest boards, on boards of cooperatives, and they will be the powers in the churches.

The pharmacist is present everywhere to assume these responsibilities and he must meet their challenge. In a less formal way than office holding, the pharmacist may be a molder of public opinion and public action. Has not the neighborhood drug store over which he presides replaced the cross roads general store as the commercial gathering place of the community? The tavern is its leading competitor, and has far less social acceptance. (Or am I naive?)

The call upon the professional man and the case for his education which transcends purely professional matter was well put by Provost Smith of the Carnegie Institute of Technology in his introduction to the volume *EDUCATION FOR PROFESSIONAL RESPONSIBILITY*. He wrote:

"If professional men are to play their part in preserving the freedom and improving the character of our democracy, they must continue to learn throughout their lives from study and experience the changing character of the problems which confront society and the changing means available for solving them. Only by doing so can their influence on public action be well-informed and free from bondage to propaganda. They must learn how to apply the power of mind which they develop in professional study and work to dealing with the complex problems that confront our government. Only by thus giving of their highest powers to the public good can they maintain the effective popular control that alone separates democratic bureaucracy from dictatorship. Finally, they must do all this in spite of the engrossing demands of professional work."

The professional man while he is a university student must be educated, first, to a willingness to accept his responsibilities as a citizen leader, and second, to perform these responsibilities in a creditable way. Some professional men feel that their life of work is enough in the community. Arthur T. Vanderbilt, Dean of New York University's School of Law, in pointed words remarked "After twenty-seven years of active participation in politics, most of that time as leader of the majority party in one of the largest counties of the nation, I venture to express the conviction that one of the greatest causes of the sickness of society is the aversion of its natural leaders, among which I include its professional men, to perform their obvious duties as citizens." Education is our chief method for changing his aversion to acknowledge responsibility acted upon.

But right motives are never enough to equip one to perform the duties of citizen leaders. The performance of these duties also calls for broad knowledge and the art of judgment. Knowledge that has been revealed and organized by the historian and political scientist, the philosopher and humanist, the sociologist and cultural anthropologist, the geographer and geologist, is the knowledge that will lead to solutions of problems of our day—domestic and international—the problems of labor and management, housing, resource conservation, public finance, minorities and the dispossessed, and above all the terrible battle ideologies for men's loyalties.

The glory of America is that these problems are discussed at grass roots levels and out of the ferment of discussion, policy is arrived at. We are committed to the proposition that the wisdom of

the many is superior to the wisdom of any elite group. But the ferment of grass roots discussion and policy formation must go on under leadership. And this leadership must be articulate as it communicates this wisdom to those in position to integrate policy and to execute it.

The pharmacist as a professional man, as a business man, as a "natural leader", stationed in almost every hamlet, village, town and city of this nation, has opportunities for the broadest kind of service that come to few others.

But has the pharmacy profession as it has planned the education of its future members, accepted this role for its members and planned accordingly? I dare not give a categorical answer, so I simply pose the question. But I venture this elaboration of the prediction that I made much earlier—that the developments of professional education which will occur in the second half of this century will occur as the members of the professions and their educational leaders accept larger responsibilities for their members and greatly expand the bases of professional education to include the social and humanistic disciplines.

The pharmacist would appear to be a man of divided loyalties: as a business man he deals in goods and services toward the end of showing a profit; as a professional man he deals in service to fellow men, often when they are in distress, with profit to himself a secondary consideration. I should think he would frequently be a frustrated individual. For example, we have read the terrific ballyhoo (if I may use such words) for the anti-histamines as cures for colds. The druggist of course sells them with apparent profit to himself. But we also hear in somewhat quieter tones that the health scientists are much distressed at the use of these products, and their indiscriminant use is deplored. The pharmacist as a business man selling the products and the pharmacist as a professional member of the health team must be in conflict with himself. I should feel that in such conflicts, the ideals of the profession must always triumph over the mores of the market place. The pharmacist's first and highest loyalty is to his profession.

Professional education will lead the student to come to grips with this conflict of loyalties and to make the right choices. But

if the student's education in the university has been broad, if he has been challenged to think philosophically—that is, if he has been confronted with the problems of values—his professional problem will be easier of solution.

It would seem to me that the university faculties have a right to insist that all its students receive an education that is liberating. The university exists *pro bono publico* and its highest responsibility to society as students are involved is to educate for responsible leadership. Does it educate for the world of work? Certainly, and professional education will always be an integral part of the university's program. But it cannot abdicate a responsibility to educate the professional man as a "leading citizen". We have said that the control of a profession resides in its members. But as long as professional education resides in a university, the university has every right to insist that the professional student also be educated to his duties as a free and responsible member of his society.

Perhaps we can now reach some conclusions. I understand that those who are responsible for pharmaceutical education are now actively considering and debating the merits of extending the pharmacist's education to a period of five and even six years beyond high school. It would be relatively simple to solve many of the problems of education, including those of the professions, if time were not a major dimension of life. But it is.

How can we do all of the things that seem to be required of us, using only the limited years of late adolescence and early adulthood in each man's life? I do not propose an easy solution because there are no easy solutions.

Could we first however agree on this proposition: a professional education can never be completed during the years assigned for a student's education. The professional school, as is true for the college or university as a whole, can only ground the student in fundamentals, establish a method of thought and problem solving relevant to a particular service or profession, and establish life long learning as a life process.

Leon Fuller of the Harvard Law faculty in a recent discussion of legal education remarked, ". . . we haven't time in three years to make a man a lawyer. But that is not our task. Our task is to start him on a program of self-education, and to give him the

fundamental insights and ways of thought that will enable him to draw the maximum profit from his later education in the school of experience." Fuller has here stated our proposition which we believe relevant to all educational enterprises carried on in the university.

We conclude by defining three elements in any complete program of professional education:

(1) Utilization of the total resources of the university to lead the professional man to acknowledge his responsibilities as a leading citizen and to act appropriately.

(2) Relative mastery of the basic knowledge (including theory) of his profession.

(3) Education in the art of rendering professional judgment.

I would not presume to spell out the details of pharmaceutical education within this framework—either curriculumwise or methodwise. Nor would I presume to tell you how many years it would take. But I presume to say there are no shortcuts nor can there be compromise with these basic ingredients, if pharmaceutical education is to retain its professional status.

The Current and Future Program of the American Foundation for Pharmaceutical Education

W. PAUL BRIGGS

The Executive Director, American Foundation for Pharmaceutical
Education

I particularly welcome this opportunity to speak to the American Association of Colleges of Pharmacy in order to discuss certain necessary new administrative procedures, to solicit your advice and, if possible, to answer your questions as to the activities of the Foundation.

*Presented at the Buffalo meeting of the American Association of Colleges of Pharmacy August 27, 1951.

It has been my distinct privilege to attend the past twenty-three meetings of the A.A.C.P. and to know most of you for many years. I am comforted to be in the midst of old friends. But now I am in a new role. I can no longer claim to be working with you as a colleague since I am now working for you. The American Foundation for Pharmaceutical Education was created for, and is dedicated to, the advancement of your work as the sculptors of pharmacy of the future. The Foundation will continue to support your essential activities in building the future status of pharmacy.

One year ago the late great Dr. E. L. Newcomb attended your sessions at Atlantic City. Shortly thereafter pharmacy lost this able and devoted leader. While his loss was felt in many areas, it was little short of catastrophic to the American Foundation for Pharmaceutical Education.

Fortunately, Dr. Ernest Little stepped in to hold the line while plans for the future of the Foundation were being developed. I am quite frankly frightened at my challenging assignment to undertake the Foundation responsibilities so long and so effectively carried by Dr. Newcomb. While I cannot give any guarantee for the future, I can assure you that no effort will be spared to maintain, and even extend, the many contributions of the Foundation to all phases of pharmaceutical education. I trust our mutual interests will develop rapidly and effectively.

Please let me embrace this occasion to thank those of you who so kindly and thoughtfully wrote me about my appointment to service with the Foundation. Your letters were genuinely appreciated—especially those offering help and wishing me luck. I will need a great deal of both!

I am also grateful to the Deans for their splendid cooperation in supplying data on Foundation Scholars and Fellows. There was no other manner in which this up-to-date information could be obtained. About sixty schools answered our first request within one month. After one reminder letter all others, excepting one school, promptly responded. Within a few weeks we will be ready to send this material to the printer, and I hope to mail each school a copy of the Roster of Foundation Scholars and Fellows in November. I think you will be impressed by this listing of over 900 Foundation Scholars and Fellows. In a few years this list may become the "Who's Who" in American Pharmacy.

It is to be expected that many errors, especially as to addresses and current positions, will show up in this first issue. We hope to issue an annual up-to-date Roster. To this end I ask that each of you advise the Foundation office of errors of omission or commission. These will be corrected and the next issue should be accurate and reliable.

As I passed through Columbus, Ohio last month, to attend the Teachers' Seminar at Purdue University, I was impressed by an inscription over the doorway of one of the State buildings. It read:

"Education and morality constitute the force and majesty of free government."

The force and majesty of America today flow from the wisdom of our forebears in placing their faith for our national achievement in the effectiveness of education. In like manner, we can assure the force and dignity of pharmacy in the future by strengthening today's educational program for pharmacy. This is a matter of paramount importance to the American Foundation for Pharmaceutical Education.

I am confident that the generous, interested and helpful drug industry will contribute liberally to necessary and realistic programs of pharmaceutical education. Already the Foundation, with funds supplied by the drug industry, has contributed well over a million dollars to aid pharmaceutical education. This is a favorable position for pharmacy when measured against the total national annual expenditure of five billion dollars for all education.

As you probably know, Dr. Newcomb carried the office work of the Foundation at the N.W.D.A. headquarters. When we established a separate home for the Foundation we were deprived of some of the clerical assistance formerly available, and accordingly I have been forced to use some form letters and adopt other labor saving methods. I hope you will be understanding of these innovations, which in some instances may also save time and labor in your own offices. Be assured that any multiple produced letter you receive is a necessary evil and not due to any lack of personal and direct interest.

The Board of Directors and the Board of Grants recently established the Foundation budget year from September 1 to August 31, to parallel the academic year. The Boards also expressed the

view that, in general, new Fellowships should be started in September and February rather than at odd times. This practice has been established. It should not result in any serious inconvenience to students and it will materially aid in budgeting and in estimating expenses.

The Board of Grants has found it necessary to fix "cut-off" dates for receiving applications for new Fellowships. These dates have been established as May 15 for Fellowships beginning in September, and November 15 for Fellowships beginning in February. Applications for renewal of Fellowships should be received sixty days prior to the expiration date of currently held awards. It will be mutually helpful if you will advise your students of these dates and urge them, in their own interest, to file their applications and requests on time.

It will facilitate the work of the Board of Grants if you will have students write directly to the Foundation office for application forms, rather to stock and supply these from the Dean's office. By doing so the Foundation office will have a record of the student's request and can then anticipate receiving his application. More important, the student will receive specific advice as to currently required information and thus will not be at a disadvantage by having an incomplete folder when considered for an award by the Board of Grants.

The Board of Grants has directed me to relay to you its attitude on the following matters:

1. In general, the Board looks with some disfavor upon applications for graduate training at the same institution where the student's undergraduate work was done. The Board feels that ordinarily schools should encourage promising men to broaden their training by taking at least a part of their graduate work at another school, especially work beyond the masters degree.
2. The Board requests that letters of recommendation be drawn to give a clear and specific picture of the student. For example, a positive statement as to the student's capacity for Ph.D. work is most helpful. If considered capable of high quality work to the Master's level only, this information should be frankly supplied.
3. Whenever possible, the Board would appreciate a statement as to the probable date of graduation and status with respect to the preliminary and language examinations. This information is especially important for advanced students.

We have asked that colleges submit one consolidated statement covering tuition, fees, etc., for graduate students for the preceding year. In the past, separate claims for as little as one dollar have been submitted as each expense occurred. This practice is expensive and time-consuming for both the college and the Foundation. It will be appreciated if you can bill the Foundation for these charges only at the end of each semester or academic year. However, if the regulations of your school do not permit the carrying of these charges to the end of the academic period, we will continue to pay your bills as submitted.

While the so-called "G.I." benefits to World War II veterans are expiring, we can anticipate a continuance of government support to the education of other veterans. The Board of Directors and the Board of Grants feel that, to spread the available funds of the Foundation as far as possible, we should discontinue, in the future, full stipend and tuition allowances to men receiving "G.I." or other similar benefits. Accordingly, we may extend only a reduced stipend to such Fellows while their government aid is in force, but if their work so justifies, place them on a full stipend upon expiration of their "G.I." eligibility. This practice will not be retroactive for Fellows who have been awarded full stipends while receiving some income from other sources.

In some institutions tuition and other academic fees are waived for Foundation Fellows. Some Foundation Fellows are exempted from all or part of such expenses in return for part time services rendered. In such cases students should be instructed to estimate and request only the amount needed for actual, required expenses. In this manner the Board of Grants can allocate the amount actually required for such Fellows, and through the saving effected, can appoint additional Fellows within the appropriation allowance.

I trust you have received these suggestions, explanations and requests in the spirit in which offered. The American Association of Colleges of Pharmacy and the American Foundation for Pharmaceutical Education are partners in the big and important business of pharmaceutical education. Through our combined force and helpful cooperation we can increase our output of graduate trained men and women. I earnestly solicit your suggestions for more efficient operating procedures.

As we enter upon the second half of the twentieth century it would appear advisable to briefly recount some of the principle activities of the Foundation and attempt to view the place of the Foundation in pharmaceutical education in the uncertain years ahead.

The American Foundation for Pharmaceutical Education was created by the National Drug Trade Conference. The Conference is the only agency formally representing all phases of pharmacy, and is composed of representatives of the American Association of Colleges of Pharmacy, American Pharmaceutical Association, National Association of Retail Druggists, American Drug Manufacturers' Association, American Pharmaceutical Manufacturers' Association, Federal Wholesale Druggists' Association, National Wholesale Druggists' Association, The Proprietary Association, National Association of Boards of Pharmacy, and the National Association of Chain Drug Stores.

The Foundation was formally organized in July, 1942 as a non-profit, scientific and educational corporation under the laws of the State of New York.

Through the war years the Foundation made some direct grants to maintain certain Colleges of Pharmacy which were in danger of financial collapse. During these years the Foundation successfully undertook a general "missionary" program to interest young men and women in the study of pharmacy. The quality and quantity of applicants to your schools since 1945 is certainly due in part to this carefully planned and effective program.

As unfavorable economic conditions developed the Foundation provided funds for undergraduate scholarships in all accredited Colleges of Pharmacy. As of this date, more than 800 students have received financial aid from the Foundation, which in recent years, has been provided only when equally matched by the college. Perhaps of equal importance is the stimulus to local sources to contribute funds for scholarships in Colleges of Pharmacy. Thus the total effect of this Foundation program may well be much greater than the mere count of Foundation Scholars as such.

In 1945 the Foundation initiated the graduate Fellowship program, with the objectives of producing more and better trained teachers for the Colleges of Pharmacy and scientifically qualified research, control and development workers for the industry. More

than 250 Fellowships have been awarded over the past six years, and the graduates are widely distributed throughout the colleges and the industry. Twenty-eight new Fellows have been awarded grants starting with the academic year 1951-52.

Since 1945 the Foundation has contributed to the American Council on Pharmaceutical Education and, currently, is almost wholly supporting this key agency for the advancement of pharmaceutical education. Much of the progress of pharmaceutical education is the result of the constructive work of the Council which can be carried on only through financial support of the Foundation.

In 1946 at the request of the American Association of Colleges of Pharmacy, the Foundation appropriated funds for a national survey of pharmacy. This project, identified as The Pharmaceutical Survey, was conducted by the American Council on Education at a cost of nearly \$200,000. This study may be expected to redeem pharmaceutical education and to exert a profound influence for good upon all phases of pharmacy. Director Elliott has estimated that as one direct result of The Survey, more than one-half million dollars has been made available and used to improve the work of colleges of pharmacy.

Beginning in 1948, the Foundation provided a substantial share of the cost to insure continuation of the American Journal of Pharmaceutical Education.

The next year the Foundation assumed the cost of the annual Teachers Summer Seminars. The Seminar program developed from recommendations of The Pharmaceutical Survey and appears to have the potential force to promptly and conspicuously improve pharmaceutical education.

Except for The Pharmaceutical Survey, which activity is practically completed, the Foundation is maintaining every program it has started, and is doing so at the same or a higher level than in the past. There is every basis for assuming that the Foundation will continue, and even extend, these supports to necessary and practical activities in the realm of pharmaceutical education.

Our budget for the year is for nearly one-quarter million dollars and it is all for pharmacy. This is a substantial contribution without which pharmaceutical education could not possibly progress, or indeed, even maintain its present position. But even this sum is by no measure too much, or even enough to advance pharmaceutical

education to its proper place. There is yet much to be done and, if at all possible, the Foundation intends to expand its programs to insure permanent occupancy of the preeminent position for pharmaceutical education.

You have the grave responsibility for shaping pharmacy in the future. You are the men who know what should be done. Each of you must have valuable ideas for improving present day training in pharmacy. I know that nearly every significant program in education costs money. I am entirely without authority to commit the Foundation to any new projects. But I can assure you that the Foundation is eager to consider every sound, worthwhile and potentially productive proposal to advance pharmacy in general and pharmaceutical education in particular.

For all our worries and divergent opinions we have good reason to hold unshakable confidence in the future of pharmacy and of pharmaceutical education. We need but hold to our course with a full head of sail to reach our goals. The most frequent entry in the log of Christopher Columbus is "This day we sailed on. Course West South West." Columbus had faith and confidence in the course he had set. He was determined to stay on his fixed course, across a vast and unknown ocean, for a full and fair test. And at journey's end he discovered America.

The Research Grant and Fellowship Program of the National Institutes of Health

KENNETH M. ENDICOTT, M.D.

Scientific Director, Division of Research Grants
National Institutes of Health, Public Health Service

It is a pleasure to describe the research grant and fellowship program of the National Institutes of Health to this Association, and to attempt to interpret the role of this program in the field of pharmacy.

*Paper presented to the American Association Colleges of Pharmacy August 27, 1951 Buffalo, New York meeting.

For those of you not familiar with the National Institutes of Health, it might be helpful to define its position in the Government organization. It is the research arm of the Public Health Service which is one of the major organizations in the Federal Security Agency. It consists of seven institutes and the Division of Research Grants, all located at Bethesda, Maryland. Each Institute has its own research program, and each Institute awards grants and fellowships. The Division of Research Grants is responsible for the administration of the total research grant and fellowship program, and, in addition, awards grants and fellowships in the broad field of medical science.

Since research grants are awarded on one basis, and fellowships on another, they will be discussed separately. Public law charges the Surgeon General of the Public Health Service with providing assistance to institutions and individuals for research and studies relating to the cause, diagnosis, treatment, control, and prevention of physical and mental diseases and impairments of man. The law requires that all grants approved by the Surgeon General must first be approved by one of the seven National Advisory Councils established to review applications and comprised for the most part of non-Government experts—both professional and lay.

These Councils needed the advice of specialists in the various scientific fields. We therefore established 18 panels of specialists including one on pharmacology and one on experimental therapeutics. These panels, called Study Sections, have two major responsibilities. One is to review applications from a technical standpoint. The other is to survey the research in their particular field, determine the needs, and stimulate new research accordingly. Since the Study Sections and Councils are composed largely of non-Government scientists, and since they have assumed the major responsibility for guidance and administration of the program, it may truly be called a program of scientists, and for scientists underwritten by the people.

Grants are usually made to an institution for an individual. In order to avoid disrupting normal operation of the institution, the National Institutes of Health has adopted the following policies:

1. The institution requesting support is allowed eight percent of the total budget for overhead.
2. Title to permanent equipment is vested in the institution.

3. The application must be approved by the university or institutional authorities before we will consider it.

4. The individual is expected to conform to the standards, policy, and administrative procedure of his institution in conducting his research. However, no grant funds may be used to free the institution of its normal administrative responsibilities.

The mechanics of applying for a research grant are simple. Upon request the Division of Research Grants mails appropriate forms to the interested scientist, who completes the forms and forwards them through his institution to the Division where they are assigned to the appropriate Study Section and Council. These groups meet three times per year, and the investigators and institutions are notified of action taken immediately after the meeting of the Council. Usually this requires about three months.

Grants are made for one year at a time with moral commitment on the part of the National Institutes of Health to support the study for a specified period of one or more additional years when necessary. These commitments are dependent upon Congressional appropriations, and upon continued research progress, but in practice a commitment has been as reliable as an actual grant. A minimum of one year of notice is provided before grant support is terminated.

Part, or all, of the Principal Investigator's salary may be included in the grant if this salary has not been paid by the institution. Summer salary may be allowed when requested provided that assurance is given that the institution allows its employees the privilege of accepting such compensation.

The subject matter of an application must fall within the broad definition of research. Projects which are merely demonstrations of the usefulness of present knowledge are excluded as are also control projects in which known methods are to be applied to the control of a particular disease. Even though the proposal is determined to be research, the Study Section and Council will ordinarily examine the proposal to determine:

- (1) Is the investigator competent to do the work proposed?
- (2) Is the problem significant to medical or closely allied research?
- (3) Will the applicant have, with support described, necessary facilities to do the work?

- (4) Does the project director have so many other responsibilities that he cannot give necessary time to the research?
- (5) Is the budget requested in proper relation to the work proposed? For example, does it include items of equipment that are not justified?
- (6) Is the language of the proposal so ambiguous in parts that one is not quite certain what is proposed?
- (7) Is collaboration, when necessary from fellow scientists or other agencies, definitely assured?

Having passed these tests, and having been recommended for support, the application is given a priority rating, and competes for funds. About half of all new applications are approved, and half of those approved are paid.

Once the grant is made the investigator has complete scientific freedom to pursue the study in his own way following an interesting new lead, or even changing the entire research direction. The only deterring factor is the possibility that the Study Section and Council may not be as well impressed with the new study, and may elect to disapprove his next application.

In the field of pharmacy we have supported projects of synthetic chemistry, and projects of isolation, purification, identification, and testing of plant drugs as well as a wide variety of studies in pharmacology.

There are a number of reasons why few of these applications have come from schools of pharmacy. Heavy teaching schedules leave little time for research. Small budgets and crowded space reduce the opportunity for research. Few colleges of pharmacy participate in graduate school activity, and, finally, the training of pharmacists, like that of physicians, is directed primarily toward producing practitioners rather than investigators.

Recognizing the critical need for well trained investigators in the medical sciences, we have taken steps to meet the need by establishing a fellowship program. Four types of fellowships are provided:

1. A predoctorate fellowship at the bachelor level for those working toward a masters degree with stipend of \$1,200, or \$1,600 with dependents.
2. A predoctorate fellowship at the masters level for those working toward a doctors degree with stipend of \$1,600, or \$2,000 with dependents.

3. A postdoctorate fellowship with stipend of \$3,000, or \$3,600 with dependents, the first year; and \$3,300, or \$3,900 with dependents, the second year.

4. A special fellowship for outstanding scientists already well established. The stipend for special fellows is determined on an individual basis.

These fellowships are awarded to American citizens to study here or abroad, and to aliens who wish to study in America. The awards are made on a competitive basis by boards of scientists at the National Institutes of Health. Applicants supply detailed information as to their academic records and general qualifications, and must present evidence that they have been accepted by a qualified institution and department. The nature of their proposed research problem is examined by the boards. There are about 470 fellows on duty at present. About 20% of those who apply receive fellowships.

This program could be of assistance to schools of pharmacy in two ways:

1. In those schools which award advanced degrees based on research the graduate students would be eligible to compete for fellowships.

2. Members of the faculty who wish to obtain advanced degrees, or to do postdoctorate research in other graduate schools, would be eligible for fellowships.

Applications from pharmacists, and schools of pharmacy, for research grants or fellowships in fields related to medical problems, will be welcomed by the Division of Research Grants of the National Institutes of Health.

NEW IN THE FAMILY

Jane Ellen Burckhalter.—Born June 21, 1951, third child and first daughter of Dr. and Mrs. J. H. Burckhalter, University of Kansas.

Jeffrey Cameron Terry.—Born August 16, 1951, at Aurora, Illinois, son of Mr. and Mrs. Ralph J. Terry, second grandchild of Prof. and Mrs. Ralph E. Terry, University of Illinois.

Richard Andrew McDavid.—Born June 28, 1951, son of Dr. and Mrs. James E. McDavid, University of New Mexico.

James Roberts Weeks, Jr.—Born May 14, 1951, son of Prof. and Mrs. James R. Weeks, Drake University, College of Pharmacy.

Needs of Our Colleges of Pharmacy

RICHARD A. DENO

**Professor of Biological Sciences, Rutgers University College
of Pharmacy**

**Director of Educational Relations, American Council on
Pharmaceutical Education**

Early in May, the Secretary of the Association suggested that some of the impressions gained during the past year from visits to nearly two-thirds of the colleges might be of interest at this meeting. I thoughtlessly agreed with him, and he then asked me to pick a title for this paper. We finally decided on "The Most Urgent Needs of Our Colleges of Pharmacy."

In a short time, I began to regret our agreement and hit on what appeared to be a solution. I wrote to the Secretary and suggested that we leave off "The Most" and shorten the title to "Urgent Needs of Our Colleges of Pharmacy." He thought that was an improvement.

Then a week later I wrote to suggest that we leave off "Urgent", and call the talk "Needs of Our Colleges of Pharmacy." Again, the Secretary was most cooperative. "Good idea," he replied.

In a few days I wrote again, this time saying that an even better title would result if we omitted "Needs of", and called the paper "Our Colleges of Pharmacy." The next deletion planned was "Our Colleges of," leaving just "Pharmacy." And since any number of people are better qualified than I am to speak on "Pharmacy," the obvious end of all this would be to get a different speaker.

However, at the stage where "Needs of" was to be amputated, the Secretary balked. After mid-June he refused to write, hence this paper.

At the outset, may I say seriously that the visits to the colleges with Dr. Elliott and with other members of the Council have been rewarding experiences. In addition, the extension of the circle of acquaintances and friends in pharmacy has been both valuable and

*Read before a general session at the 1951 meeting at Buffalo, New York.

pleasant. I am looking forward to still further widening of this circle within the coming year.

Also, study of the detailed Council data, correspondence, and reports on each college has been a rather liberal education. At the same time, a serious responsibility is involved; to so use the confidential data and other information that improvements are expedited with a minimum of misunderstanding.

Just one more word by way of introduction. Lest it appear later than I am overly-critical, the most vivid impression from the year's work is of the marked progress that has been made in pharmaceutical education. In a few colleges, improvements have been spectacular; in many colleges they have been slow but steady. The American Association of Colleges of Pharmacy can be proud of the role it has played in this progress.

Variations Among the Colleges

One difficulty in writing this paper arises from the fact that the colleges are of diverse nature in many different ways. While this discussion deals with impressions, at the same time I would like to be reasonably objective in stating generalizations. This is not easy, with 72 accredited colleges in which not two are closely alike.

In the matter of control, this is vested in the state or nation for 42 of the colleges. A dozen are units of private institutions of higher education. Nine more are parts of church-controlled institutions, and three of the colleges are in municipal universities. Only six remain of the many colleges of pharmacy once under independent control.

However, four of the state—and one of the church-controlled colleges function as self-contained institutions. They themselves teach all of the courses in their curricula, and in this respect are more nearly like the independent colleges of pharmacy.

Of the 12 colleges that belong to private institutions of higher education, three are affiliated units and nine are organic parts of the universities or institutes. The three affiliated colleges function largely as independent units.

So actually, 14 colleges of pharmacy are independent in mode of operation, although four of the 14 are subsidized by the state,

one by the church, three are affiliated, and only six are completely under private control.

When an attempt is made to learn curriculum patterns, an even more involved situation is found. Likewise with respect to admission requirements, promotion practices, qualifications of staff members, et cetera. Truly, no two of the 72 accredited colleges are closely alike.

This variegated nature results in markedly different needs in different institutions. Probably no one school is deficient in all respects to be mention, just as no school is a model in every way.

College Aims and Program

Early last fall, one of the elder statesmen of pharmaceutical education, a retired dean whith more than 40 years experience in the field, talked with me about the need for a careful reexamination of just what each college is trying to accomplish. I did not give much thought to his concern over this at first, but as we visited college after college, and found many with no really clearcut idea of what their aims were, the visit with the retired dean repeatedly came back to mind.

I realize that as soon as you start talking about aims and objectives, and the need for tailoring the program of a college to fit the stated aims, immediately you become suspect and find yourself classified as an educational theorist who really belongs in a teacher's college. This is one way, of course, for those responsible for the program of a college to brush off the matter, and it is not entirely unknown to pharmaceutical administrators.

As some of you know, the application forms of the Council provide for a formal phrasing of objectives. In many instances, concise and thoughtful statements have been provided. In other cases the stated objectives may be the actual ones of the colleges, but some of them never should have been put in print. Among the aims that have been given are to prepare the student to pass the state board of pharmacy examinations; to put an asphalt tile floor in the pharmacognosy laboratory; and to get a raise for the dean.

Obviously, these are all worthy objectives, especially that relating to board examinations. Among the responsibilities of a col-

lege is certainly such preparation of a student as is necessary to enable him to meet the legal requirements for the practice of pharmacy. But when this becomes the sole aim, or even the major one as it now is in a number of colleges, many critical objectives are by-passed. If this is the principal aim, then a two-year, or even a one-year course would be sufficient, in most cases.

In the proposed revision of the Council standards that is currently being considered, the point is made that the aims of every college must indicate recognition of pharmacy as a service profession in the health science field. Certainly there is nothing original or controversial here. Yet a number of colleges give little evidence to show that the educational program has been developed with the professional services to be rendered today and tomorrow clearly in mind.

Also contained in the proposed revision of the standards is the statement that there should be evidence of an appreciation and acceptance by the faculty of the stated aims. Actually, the faculty should have a major voice in formulating them. And unless the program of the college has been designed to accomplish the stated aims, then the formal verbalization of these aims is of no value or significance.

To state one specific example, a college professes to aim to prepare its students (and this at the undergraduate level) for the many branches of the profession, including retail, industrial and manufacturing pharmacy, research, and teaching. The program of the college is not well designed to prepare a student adequately for a single one of the fields.

To return to the opinion of the retired dean, I feel that he wisely put his finger on a critical need of a majority of our colleges: to carefully consider just what the institution aims to accomplish, and at least to try to map out an educational program based on these aims. It does not make much sense to be on the road going some place and know well neither the place nor the route.

Curriculum

From teaching experience in two good colleges of pharmacy, I had naively assumed that discussion of the curriculum and at

least occasional revision of it was characteristic of every college. It is common to many. It is almost unknown in others.

There are colleges where practically no formal changes have been made in the curriculum since the introduction of the four-year course. There have been changes, of course, in the material presented, in conformity with revisions of the official books of standards, and in line with recent developments in antibiotics, endocrines, et cetera.

Notwithstanding, these curricula bear indelible evidence of an absence of careful coordination. Sequential arrangement of related subject matter is frequently illogical. Physics may be given toward the end of the four years, obviously merely an appendage to the curriculum. Organic chemistry follows courses to which it should be prerequisite. Pharmacology precedes biochemistry.

Not so evident from the published curricula but readily learned at the times of examination is the fact that relatively few colleges have given attention to correlation of subject matter in related courses. A chemist does not know of chemistry being taught in pharmacognosy or in dispensing pharmacy. A pharmacologist is unaware that certain material given by him has already been presented in the chemistry of organic medicinals. A pharmacy teacher proceeds as though his subject was the only one in the entire curriculum that mentions a particular drug; he gives them the works on it, and in the process completely exhausts his intellectual resources on the topic.

No good teacher fails to recognize the value of repetition. I am not prepared to say how much of the repetition found in courses in the colleges of pharmacy is needless and boring. I believe that an appreciable amount of duplicated material could be eliminated by cooperative planning and discussion of related courses. A by-product of such planning should be that none of the essential elements or steps is omitted through an assumption that it is covered in some other course.

The complete absence of one or more courses commonly accepted by experts in the field as core requirements is not unusual; for example, accounting, physiology or the chemistry of organic medicinals. Invariably, the answer to a question concerning this is that the course is worthwhile, even important, but there just is not time enough to include it in a four-year curriculum.

The specific curriculum, however, may devote 10% of the total hours to traditional pharmacognosy. Or it may contain a year of quantitative analysis and a semester of drug assay, all with substantial laboratory work. Or the curriculum may have laboratory courses in pharmacy, or courses in what is essentially *materia medica* (no matter what they are labelled) far in excess of what can reasonably be justified today.

It is not possible without a great deal of compromise to effect the reorganization and correlation so badly needed in many curricula. Or to have a rational balance between the basic sciences and the courses in the professional areas. Or between the sequence in chemistry and that in biology. As long as one department is allowed to make a pig of itself, some other department will go hungry.

I do not believe that any college can devise a curriculum completely adequate to send forth a graduate in four years after high school, "who understands thoroughly what he is doing, who comprehends the scientific bases of drugs and drug action, who is able to evaluate critically the products he handles, who is competent to advise physicians and members of the other health professions concerning drugs and their uses, who works at his profession creatively and advances its service." This is from the General Report of The Pharmaceutical Survey.¹

Neither do I believe that a majority of the colleges have exhausted the possibilities inherent in the recommendation of the Survey to, "... continue their efforts for the constructive betterment of the existing four-year program of education and training . . ."² True, the recommendation is addressed to the College Association and to the Council. There is nothing in the Survey Report, however, to indicate that an individual college should wait for action from the Association or the Council before going to work on its existing four-year program.

Effective Instruction

Foremost among the questions whose answer is sought during an examination of a college by representatives of the Council is how effective is the instruction? An accurate and completely satisfactory answer to this is probably impossible to obtain. Because

the best measure of effective teaching lies in the quality of the graduates, not necessarily as indicated by their academic records but rather by their success after they leave the institution. I hasten to add that financial success should not be the only measure either. Our colleges profess to give at least some attention to the problems of living as well as to those of making a living. No readily assessable and dependable means for determining success of the alumni of a college has been devised.

Council representatives have been told that pharmacy has a yardstick on hand for judging the quality of instruction: success in passing the examinations of the state boards. Without lengthy discussion of this, and without disparagement of the significant role of the boards of pharmacy, I cannot agree that passing a board examination is more than an incidental criterion of effective collegiate instruction.

Some of the indirect measures that probably bear on effective instruction are study by the staff of the problems of teaching; the nature, quality, and results of examinations; and particular attention by experienced men to teachers beginning their careers, that they may be encouraged and helped.

Ordway Tead³ and others emphasize the differences between college teaching and college learning. Teaching and learning, of course, are as inseparable as the two sides of this sheet of paper. Yet teachers may teach, but the students do not learn. Which brings us back to the earlier contention, that the best measure of effective teaching is the success of the alumni.

Relatively few of our colleges of pharmacy have systematic programs dealing with the problems of teaching and learning. If this is mentioned at a college, again the press of time is emphasized. But teaching and learning are the business of all colleges of pharmacy, and every single college could profit by paying greater attention to this business.

Physical Facilities

President Margaret Clapp of Wellesley College says in *The Modern University*, "Find a university that does not need money, and you find a university that is sleeping."⁴ According to this criterion, all of our colleges of pharmacy are so wide-awake that it

is pitiful. Our insomniac institutions all need money; for buildings, additions, laboratories, equipment, new staff members, increases in salaries, et cetera.

I do not want to say anything here that might in any conceivable way delay the physical improvements urgently needed in many of the colleges. Notwithstanding, our colleges today are in better shape physically than ever before. I believe that the past six years have seen more improvements in plants and equipment than any other six-year period in history.

In support of this statement, may I mention only some of the colleges that have recently undergone face-lifting operations. Completely new buildings are now occupied at New Mexico and at Drake. Connecticut, Butler and Texas have pharmacy buildings partially completed. St. John's has a new pharmacy-classroom, cafeteria and library building. Illinois is about to erect a multi-million dollar building (\$5,540,000). The building will be devoted 99.44 per cent to pharmacy, although for reasons best known to the Dean of the College it is being called the East Dentistry-Medicine-Pharmacy Unit. Substantial wings recently added to existing buildings at Colorado and Michigan are devoted largely to pharmacy. There are at least a half dozen other colleges where prospects for new pharmacy buildings are excellent.

At Georgia and West Virginia, campus buildings have been completely remodelled and assigned to pharmacy. Remodelling has been partly accomplished at Wyoming and will soon be completed there. In at least two midwestern states, the colleges of pharmacy have excellent prospects for soon securing additional space in buildings currently shared with other sciences. Extensive remodelling has provided good quarters at Temple, at Utah and at the State College of Washington.

Many colleges in addition to those mentioned have newly furnished and equipped laboratories for research, dispensing pharmacy, pharmacology, or general pharmacy. This is true at Buffalo, Duquesne, George Washington, Massachusetts, St. Louis, Kansas, Wayne and others.

It is practically impossible to give an accurate estimate of the value of permanent new equipment for teaching and research added to the resources of the colleges of pharmacy since the recent war. Certainly, it runs into many hundreds of thousands of dollars.

On the other hand, there are a number of colleges urgently in need of certain laboratories, especially for pharmacology and for dispensing pharmacy. Nearly all of the colleges have some equipment needs. Sometimes these are critical and are holding up the educational program, particularly in research and in manufacturing pharmacy. A considerable number of the colleges are operating on meager budgets that are reflected chiefly in the inadequate salaries of the teaching staffs. A number of the pharmacy libraries are not a credit to the institution.

In spite of these facts, I do not believe that physical wants belong at the top of the list of the needs of our colleges. First and foremost of these needs is the last to be discussed here, the needs arising from unsolved personnel problems.

Personnel Problems

Under personnel problems I am including those involving both the students and the teachers. President Clapp relates these needs to what she calls learning power, teaching power, and research power. Concerning the first of these she says, "Today, the first need among universities everywhere, . . . is learning power, which is native ability plus the will to learn". In discussing learning power, Dr. Clapp states, "If large numbers of students arrive at the university without a solid academic foundation on which to build, the quality of university education must suffer."⁵

She also says, "It is not enough for the older generation to offer all young people two decades of schooling, or even sixteen years of it, unless it makes sure at every stage that students with learning power are neither held back by a slow pace nor unsoundly passed upward, and unless, somehow, young people see in education a right to be cherished not a burden to be tolerated."⁶

The material quoted could just as well have been said of colleges of pharmacy as of universities.

Many of the colleges are able to use the services of professional admissions officers, and after a student has been admitted, an elaborate counselling service is on hand. Other colleges do not have these facilities available for the asking, and in some cases where they could be had, they either are not used at all or are only partially utilized.

The problems of admissions and promotions are frequently complicated by general university regulations. But it is rare to find an instance where an acceptable solution cannot be found. When the needs of a professional college are other than those of the institution as a whole, requirements peculiar to the profession can usually be added.

Anyone who has had experience in admissions work knows both how important it is and how beset with difficulties. This is no reason for avoiding a forthright attempt to deal with the problem. It needs such attention in many of our colleges. Likewise do promotion practices and counselling procedures need to receive serious consideration.

Teaching power in our colleges of pharmacy is probably greater today than it has been at any time in the past. I believe that more well-trained men are now teaching in the colleges, and that annually more are entering pharmaceutical education as a profession than ever before. In spite of this, the records show a serious shortage of well-trained teachers in all of the areas of professional instruction: pharmacy administration, pharmaceutical chemistry, pharmacognosy, pharmacology, and pharmacy.

In order to get some idea of the extent of this shortage, I have studied the records showing the training, experience and activities of the professors in the professional areas. From these records, supplemented frequently by personal knowledge, a rough classification of the teaching personnel has been made. The classes include professionals, semi-professionals or amateurs, and pinch hitters.

Professionals are those whose graduate training, memberships in specific scientific societies, participation in organizational work and publications are or have been in the area of teaching activity. For example, a professional pharmacologist would be one with the degree of Ph.D. with the major in pharmacology. He would belong to the Society for Experimental Biology and Medicine, or to the American Society for Pharmacology and Experimental Therapeutics, or to both. He would be active in local and national organizations that relate in whole or in part of pharmacology. And he would have publications in pharmacology in several of a dozen or more journals that accept articles in this area.

A semi-professional or amateur is one who has had some graduate training, or experience that gave opportunity for growth in a professional area, who attempts to keep up with recent advances and who likes to teach in that area, but who is not especially active in research or publication.

A pinch hitter is one who has had relatively little or no advanced training in the area in which he is teaching, and who contributes little or nothing of an original nature.

To illustrate specifically what I have in mind, I am (or used to be) a professional zoologist with a background in pharmacy. I teach biology to freshmen, and consider this my professional field.

In addition, I teach biochemistry to seniors. Here I am an amateur. I have had a semester of graduate study in biochemistry beyond a medical school course and do considerable reading in the field. I enjoy teaching biochemistry, but it is not my field of professional specialization.

Since I am a registered pharmacist, it is remotely conceivable that in an extreme emergency the Dean might ask me to handle dispensing pharmacy for one semester. I could keep one jump ahead of the class and probably get by. But I would be a hack here; a rank pinch hitter.

In attempting to classify teachers in the colleges of pharmacy the criteria for the three classes have not been applied rigidly. Undoubtedly, there have been mistakes in judgment, but I believe that the figures to follow are reasonably accurate. Errors are probably on the generous side.

In pharmacy administration there are only seven of the 72 accredited colleges that have the full-time services of professionals in this area. Three or four others have the part-time services of professionals, and around 20 colleges make use of ancillary professionals from schools of commerce or business administration for one or more of the courses in pharmacy administration. Over half of the colleges do not have even reasonably adequate solutions worked out to the problem of instruction in this area.

In pharmaceutical chemistry, 49 colleges are provided with either professionals or semi-professionals satisfactory for the program of the college. A number of colleges have two or more well-qualified professionals apiece in this area of instruction.

Twenty-five of the colleges are provided with professional pharmacognosists. In an equal or possibly greater number of colleges, reasonably adequate instruction is given by semi-professionals or amateurs.

For pharmacology, 34 of the colleges are served by professionals or by younger men with graduate degrees in pharmacology and who will probably develop into professional pharmacologists. Included in the 34 are the 14 colleges in which pharmacology is taught in a medical school department. There are relatively few semi-professional pharmacologists capable of presenting the subject from the modern point of view.

Fifty-one of the colleges have one or more teachers in pharmacy who are either professionals, or semi-professionals with years of experience and study in the field. In many colleges, the pharmacy professionals do not have the degree of Ph.D. but their teaching, publications and other activities unquestionably warrant designation as professionals.

Inaccurate as this classification is, it gives some indication of the needs in the respective areas of instruction. Nearly a third of the colleges need teachers in pharmaceutical chemistry and nearly a third in pharmacy. About one-half of the colleges need pharmacologists, and nearly two-thirds lack professional pharmacognosists. Only a mere handful of the colleges have full-time professionals in the area of pharmacy administration. We should note also that an appreciable percentage of the professionals in each area of instruction are approaching the retirement age and replacements will soon be needed.

To state the problem in different terms, a Council standard effective a year hence provides that, "There shall be at least one properly qualified full-time teacher of professorial rank for each of the following departments: (a) pharmacy; (b) pharmaceutical chemistry; (c) pharmacognosy; (d) pharmacology; (e) pharmaceutical administration . . ."

If every accredited college of pharmacy now complied with this standard, there would be five times 71, or 355 departments having professional personnel, at least one professional per department. Today, there are less than one-half of this number.

To state this in still another manner, there are sufficient professionals now available properly to staff about one-half of our col-

leges of pharmacy. There are enough professionals for more than half of the existing colleges for certain areas of instruction, but for less than half of the colleges for other areas.

Related to these needs for teachers is the current situation in the field of graduate study. Among the colleges, 35, almost exactly one-half of the accredited colleges, offer graduate instruction. In 17 colleges, about one-fourth of all of them, the degree of doctor of philosophy or of doctor of science is granted. However, no more than a dozen colleges of pharmacy have other than very modest graduate programs. It is doubtful if more than this dozen have the resources in staff and facilities properly to care for more than a handful of candidates for the master's degree only.

Most of the research power of our colleges of pharmacy is in those institutions that offer graduate instruction. There has been a marked increase in research power in the colleges since the close of the recent war. In spite of this, pharmaceutical research is appallingly weak in the colleges as a whole. It is small in quantity and too often it is not of high quality. Many of our doctors of philosophy are stillborn, as far as investigational activities are concerned.

These opinions obviously do not pertain to the very few colleges that are making real headway in developing research programs. Nor are the unfavorable statements made unthinkingly, or without the advice of men better qualified to evaluate pharmaceutical research in the colleges than am I. We urgently need to increase our research power, and this requires additional facilities and personnel of high quality.

I am lacking in temerity to attempt an outline of criteria for professional deans. We can, however, get some notion of the needs here from another approach. Nearly a third of our deans are over sixty years of age. A large majority of the colleges now have provisions for obligatory retirement. In some colleges this is at the age of 65 for those in administrative positions. In other colleges it is at 68, 69 or 70. I do not believe it an exaggeration to suggest that within the next decade there will be at least 25 new deans in our colleges. This estimate does not include the inevitable reshufflings. It means that 25 men, now serving as professors or in some other capacities, within the next 10 years will be handed the poisoned chalice.

A truly urgent need of our colleges is that these 25 men, whoever they are, give serious thought to the duties and responsibilities of a dean. Not infrequently, a professor assumes a deanship but continues to profess with too little attention to the problems of deaning. He is aware of the petty annoyances associated with the position, but he does not embrace the opportunity offered for positive constructive leadership.

In every college that has grown in stature over the years, an aggressive and vigorous hand has been at the helm. The dean has been active in local, state and national pharmaceutical organizations. He has shown a progressive interest in the problems of pharmaceutical education. He has lead the way in perfecting and in implementing the instructional program of the college. He has not been afraid to fight for what he and his staff judge to be essential for the development of this program.

May the next decade provide our colleges with 25 new leaders. Men with the courage, wisdom, and energy to recognize and to embrace the responsibilities of deanships. If these men are found, then many of the other needs we have talked of will be fulfilled in the course of time.

REFERENCES

- (1) The General Report of The Pharmaceutical Survey, 1946-49, p. 101 (Washington: American Council on Education, 1950).
- (2) *idem*, p. 229.
- (3) Tead, Ordway, *College Teaching and College Learning*, ch. 4 (New Haven: Yale University Press, 1949).
- (4) Clapp, Margaret, edit., *The Modern University*, p. 106 (Ithaca: Cornell University Press, 1950).
- (5) *idem*, pp. 97-98.
- (6) *idem*, p. 100.
- (7) *Accreditation Policy and Procedure*, p. 11 (Chicago: American Council on Pharmaceutical Education, 1948).

Reports of Officers, Committees and Delegates of the American Association of Colleges of Pharmacy at the 1951 Meeting at Buffalo, New York*

Report of the Secretary-Treasurer

Three hundred and thirty-seven inquiries were received during the last fiscal year from prospective students and student counselling services. A copy of the A.Ph.A. Bulletin number 14 and a list of A.A.C.P. member colleges was sent to all interested persons.

Dues for the sixty-three colleges of the Association were received and these together with all other receipts and disbursements have been itemized and submitted to the Executive Committee for their consideration and approval. A summary of all disbursements and receipts is attached to this report for publication in *The American Journal of Pharmaceutical Education*.

Following the instructions of the Executive Committee a separate account has been set up for the Seminar on Pharmacology and Related Subjects. The items of expense received and paid as of August 1 are also attached as a part of this report. The balance in the Seminar fund as of August 1 was \$1,471.09.

The summary of funds of this Association indicate a current cash balance of \$9,708.39. The fund for the study of pharmacy has a cash balance of \$596.46 and the sum of \$363.70 balance remains in the Vick Chemical Company Fund. In addition to these cash items the Association has \$4500 in United States government bonds.

*Committee Reports not appearing in this issue will be printed in the January 1952 number.

SUMMARY OF RECEIPTS

August 1, 1950 to July 31, 1951

Cash on hand August 1, 1950.....	\$ 8,257.87
United States Bond.....	1,000.00
Dues—63 Colleges.....	6,300.00
Application Fees— 4 Colleges.....	100.00
Income from Journal.....	1,332.50
Interest on Bonds.....	112.50
Contribution from the American Foundation for Pharmaceutical Education for deficit on The Journal, Volume XIV.....	4,381.58
Honorarium returned—Crawford.....	50.00
B. V. Christensen—Postage Refund.....	40.00
Wayne University replacement check.....	1.00
	<hr/>
	\$21,575.45

SUMMARY DISBURSEMENTS

August 1, 1950 to July 31, 1951

Expenses Interim Executive Committee.....	\$	989.23
Expenses of Curriculum Committee Meeting.....		293.96
Telephone and Telegraph, Postage.....		377.25
Clerical Assistance for Officer (Secretary).....		237.68
(Editor)		242.25
Printing of The Journal.....		6,776.25
Expenses of Representatives to various meetings.....		247.36
Expenses of Seminar on Pharmaceutical Administration.....		1,796.06
Expenses of Committee on Audio-Visual Education.....		56.36
Printing—Mimeographing		140.38
Contributions Paid		795.00
Honoraria		300.00
Committee on Graduate Studies.....		5.04
Committee on Summer School Survey.....		40.19
Expenses Air Force Conference.....		198.53
Expenses Representatives to A.A.C.P. N.A.B.P.....		678.95
Expenses A.C.P.E.-A.A.C.P. Chicago.....		114.46
Miscellaneous25	3.60
	.20	.31
	4.00	1.00
		<hr/>
		9.36
		<hr/>
		\$13,298.31

CHECKING ACCOUNT

August 1, 1950 to July 31, 1951

1951

August 1, 1951

Receipts	\$20,575.45
U. S. Bond # M395380 G.....	1,000.00
	<hr/>
	21,575.45

DISBURSEMENTS

Forwarded	13,298.31
Cash on Hand.....	7,277.44
U. S. Bond M 395380 G.....	1,000.00
	<hr/>
	21,575.45

SUMMARY OF ALL FUNDS

Belonging to

**THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY
ASSETS**

Checking Account

1951

August 1 Cash on Hand.....	\$7,277.14
August 1 United States Saving Bond.....	1,000.00
	<hr/>
	\$ 8,277.14

FUND FOR THE STUDY OF PHARMACY

August 1, 1950 Cash in Savings Account.....	591.03
January 1, 1951 & July 1, 1951 Interest on Savings Account	5.43
August 1, 1951 United States Savings Bonds.....	3,500.00
	<hr/>
	\$ 4,096.46

VICK CHEMICAL COMPANY RESEARCH FUND

August 1, 1951 Cash on hand.....	363.70
	<hr/>
	363.70

SEMINAR ON PHARMACOLOGY AND RELATED SUBJECTS

August 1, 1951 Cash on hand.....	1,471.09
	<hr/>
	1,471.09

Total.....	\$14,208.39
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EXPENSES
TEACHERS SEMINAR ON PHARMACOLOGY AND RELATED
SUBJECTS

July 9-14, 1951

Administration	\$ 500.00
Informal Reception	66.75
Stenographic & Clerical Expenses.....	517.20
Program Expenses	80.25
Travel Expenses & Honoraria for Committee (not including Chairman).....	860.73
Faculty Travel	450.69
Faculty Rooms, Meals.....	364.20
Demonstrators	370.00
Supplies	398.98
Faculty Honoraria	920.11
Total.....	<u>\$4,528.91</u>

LOUIS C. ZOPF, Secretary-Treasurer

Report of Executive Committee for the Association Year, 1950-51

During the Association year, meetings of the Executive Committee have been held at Atlantic City, New Jersey, May 2, 1950; at Chicago, Illinois, November 13 and 14, 1950; and here at Buffalo on August 25 and 26. Additional meetings will be held during this week. Minutes of the Atlantic City meeting were published in the July, 1950, issue of the *American Journal of Pharmaceutical Education* (Page 484); the minutes of the interim meeting held at Chicago appeared in the January, 1951, issue of the *Journal* (Page 117). Copies of the minutes were also mailed to all member colleges by Secretary-Treasurer Zopf subsequent to each meeting.

In response to a request sent out to all schools and colleges of pharmacy on October 2, 1950, enrollment data for the first term (quarter or semester) of the academic year 1950-51 were assembled.

The comprehensive report was distributed by mail to all colleges of pharmacy; the State boards of pharmacy; the National Association of Boards of Pharmacy; the American Pharmaceutical Association; the officers of the eight districts of Boards and Colleges of Pharmacy; the members of the Board of Directors of the American Foundation for Pharmaceutical Education; the members of the Commission on Professional Manpower for Pharmacy and the pharmaceutical press.

The collection and dissemination of enrollment data during the first term of the academic year is in compliance with action taken by the Executive Committee of the Association at their 1949 Chicago meeting held October 10 and 11, and is being continued in order that the Association may discharge its responsibility in implementing Recommendation 5A (Part I, Findings and Recommendations of the Pharmaceutical Survey, 1948), which deals with the problems of supply and demand for trained pharmacists and professional manpower records. This is the third year that the Association has carried out this survey on its own responsibility, after having cooperated with the Pharmaceutical Survey during the two preceding years in similar studies.

It is recognized that the necessity for this report, which is in addition to the reports required under Section 7 of Article I of the By-Laws, places an increased burden on deans and directors and staff members of the schools and colleges of pharmacy. However, the importance of obtaining this information early in the academic year should be recognized. This year, in particular, the data have been extremely important and useful, because of the increased interest in problems affecting student enrollment, student deferment and pharmaceutical manpower requirements of both the civilian population and the armed forces.

The cooperation which has been given the Chairman of the Executive Committee by deans and directors, both with reference to this special report, and to the regular reports required by our By-Laws, has been perfect and all deans and directors deserve special commendation for this. Such support is most gratifying and is considered as evidence of the deep interest on the part of all in the activities, aims and objectives of the Association. As the result of such perfect teamwork, we have been able to compile

accurate and very comprehensive reports for the academic year 1950-51, both special and regular, which include every school or college of pharmacy in the continental United States and Puerto Rico.

Since the detailed report on enrollment for the first term (quarter or semester) of 1950-51 has been so widely distributed, we are including here only a brief summary of this information in order that it may be shown as a part of the official record.

CONDENSED REPORT OF ENROLLMENT

First term (quarter or semester) 1951-52

	Men	Women	Total
Member Colleges	15,483	1,604	17,087
Non-Member Colleges	2,609	202	2,811
Totals.....	18,092	1,806	19,898

Students Receiving Benefits Under Public Laws 16 and 346

	Men	Women	Total
Member Colleges	5,776	24	5,800
Non-Member Colleges.....	1,094	4	1,098
Totals.....	6,870	28	6,898

Graduate Enrollment

	Men	Women	Total
Member Colleges	410	54	464
Non-Member Colleges	3	0	3
Totals.....	413	54	467

Calls were sent out at the appropriate dates for the usual reports required under Sections 7a and 7b of the By-Laws of the Association for data on admissions, for the period April 1, 1950-April 1, 1951; for enrollment during the last term (quarter or semester) of the academic year 1950-51; and degrees conferred since the June (spring) commencement, and including the degrees conferred at the June (spring) commencement of 1951. Here, also, as had been the procedure followed in assembling the enrollment data for the fall term of 1950-51, the non-member colleges were invited to submit reports and again all of them responded. Summaries showing

admissions, enrollment, and undergraduate and graduate degrees conferred, derived from the individual reports received from 75 schools and colleges of pharmacy (62 member colleges and 13 non-member colleges) follows:

**REPORT ON ADMISSIONS, ENROLLMENT AND DEGREES
CONFERRED BY SCHOOLS AND COLLEGES
OF PHARMACY**

Based upon reports submitted to the Chairman of the Executive Committee of the American Association of Colleges of Pharmacy
for the year 1950-51

**STUDENTS ADMITTED TO SCHOOLS AND COLLEGES
OF PHARMACY**

April 1, 1950 to April 1, 1951

	Fresh.	Adm. With Adv. Std.	Adm. as Soph.	Adm. as Ir.	Adm. as Sr.	Total Adm.
Member Colleges (62)						
Men	3226	1888	1835	37	16	5114
Women	359	167	157	5	5	526
Totals	3585	2055	1992	42	21	5640
Non-Member Colleges (13)						
Men	470	301	279	19	3	771
Women	44	26	23	3	0	70
Totals	514	327	302	22	3	841
Grand Totals.....	4099	2382	2294	64	24	6481

**UNDERGRADUATE ENROLLMENT IN SCHOOLS AND COLLEGES
OF PHARMACY**

Last (spring) quarter, term or semester, 1950-51

Member						
	Fresh.	Soph.	Ir.	Sr.	Spec.	Total
Colleges (62).....	3470	4466	4096	4336	61	16,429
Non-Member						
Colleges (13).....	549	672	608	743	19	2,591
Grand Totals.....	4019	5138	4704	5079	80	19,020

GRADUATE ENROLLMENT IN SCHOOLS AND COLLEGES OF PHARMACY

Last (spring) quarter, term or semester, 1950-51

Member Colleges (62).....	462
Non-Member Colleges (13).....	3
Total.....	465

SUMMARY OF DEGREES CONFERRED

July 1, 1950-July 1, 1951

Undergraduate Degrees

	Member Colleges (62)	Non Member Colleges (13)	Totals
B.Sc. (in Pharm.).....	4501	779	5280
B.A. (in Pharm.).....	2	0	2
Bach. of Pharm.....	14	0	14
Dr. of Pharm.....	1	0	1
Grand Total.....			5297

Advanced Degrees

	Member Colleges (62)	Non Member Colleges (13)	Totals
M.Sc.*	122	1	123
Ph.D.	41	0	41
M.Sc. (Hon.).....	1	0	1
D.Sc. (Hon.)	7	0	7

In view of the great concern on the part of many deans and directors, with reference to the possibility of serious losses of student enrollment through enlistment or induction in the armed forces, especially during the period of great uncertainty, while the amendments to the Selective Service Act were under consideration by Congress, it may be of interest to compare the figures for total enrollment for the fall term with those of the spring term. Among the member colleges, enrollment dropped from 17,087 to 16,429, corresponding to a decrease of 3.85 per cent. In the non-member colleges, enrollment decreased from 2,811 to 2,591, or by 7.83 per cent. Total enrollment in all colleges declined from 19,898 to 19,020.

*With major in pharmacy or related fields.

corresponding to a decrease of 4.38 per cent. In view of the fact that this shrinkage in enrollment is, in part, due to losses through graduation either at the end of the summer term, or at the end of the fall term, and even under ordinary conditions, probably represents a normal trend, it is not believed that losses due to enlistment or induction into the armed forces have been nearly as great as had been anticipated by many. On the contrary, it is entirely possible that the proportion of the pharmacy student population entering the armed forces during the last academic year is considerably lower than that for the civilian population at large in the corresponding age group.

It is also of interest to note the steady decline in the percentages of the total undergraduate enrollment represented by students receiving benefits under Public Laws 16 and 346 during the past academic year of 1948-49, 1949-50 and 1950-51. For the member colleges, these percentages were 61.8, 49.8 and 33.9 respectively. Among the non-member colleges, the figures were, for the same years, 61.9, 54.4, and 39.0 per cent, respectively. For the total enrollment in all colleges for the same periods, percentages of 61.8, 50.3, and 34.7 respectively, are shown.

The report on student admissions reveals that a relatively large proportion of all students entering colleges of pharmacy have had previous collegiate training. For the year 1950-51, these are, for member colleges, 36.45 per cent; for the non-member colleges, 38.88 percent; for all colleges, 36.75 per cent. Corresponding values for the academic year 1949-50 show similar proportions. These were, for the member colleges, 37.82 per cent; for the non-member colleges, 30.95 per cent; and for all colleges, 36.97 per cent.

Activities of the Executive Committee during the past year have been varied and numerous. During the same period, the volume of correspondence received and sent out by the Chairman of the Executive Committee has approximately tripled that of the year 1949-50, and during that year the volume was, in turn, approximately twice that of the preceding year.

A plan providing for representation of the Association by one of its officers at each of the district meetings of the Boards and Colleges of Pharmacy has been inaugurated during the past year, on an experimental basis. Since the Eighth District meeting was

scheduled without sufficient advance notice to permit arrangements to be made, the Association was not represented. However, at all other district meetings representatives were present. The officers attending were, at the meetings of Districts 1 and 2, President Hugo H. Schaefer; at the meetings of Districts 3, 4, and 5, Secretary-Treasurer Louis C. Zopf; and at the meetings of Districts 6 and 7, Chairman Joseph B. Burt. Reports on each of these seven meetings have been made to the Executive Committee by the officer in attendance, and the Committee believes that this program has been of great value to them in providing a closer liaison and better understanding of the problems confronting each district, and that the plan should be continued. However, the Executive Committee welcomes any suggestions concerning this matter from the membership of the Association. The question is whether the benefits received, both by the Association as a whole, and by the several districts, justifies the travel expense involved.

Since our last meeting, two seminars for teachers have been held under the auspices of the Association, both supported by grants of funds from the American Foundation for Pharmaceutical Education. The teachers seminar in Pharmacy Administration was held at Ohio State University, June 19-30, 1950 and the teachers seminar on Pharmacology and Related Subjects at Purdue University, July 9-14, 1951. Detailed reports on both seminars will be made during the sessions of the Association by the Chairman of the respective committees, and for that reason, extended comment on this subject has been omitted from this report. The Executive Committee does wish to express the view, however, that this activity has become one of the most valuable services the Association has ever offered its members, and represents a major contribution to the improvement of teaching in the schools and colleges of Pharmacy.

On January 25, 1951, Secretary-Treasurer Zopf, Dr. George L. Webster, and the Chairman of the Executive Committee attended a special session of the meetings of the American Council on Pharmaceutical Education at Chicago, Illinois, at the invitation of the Council, for the purpose of discussing manpower problems in pharmacy, the effect of mobilization on pharmaceutical education and the possibility of deferment of selected pharmacy students. A

fourth member of the Executive Committee, Dr. B. V. Christensen, was also present, by virtue of his membership on the American Council on Pharmaceutical Education.

A review of the existing situation and the proposed amendments to the Selective Service Act, as presented by S.F. No. 1, was presented by Dr. Robert P. Fischelis, who also outlined the content of a statement which he proposed for presentation at the hearings to be held by the Preparedness Sub-Committee of the Armed Services Committee of the Senate on January 30, 1951. It was agreed by those present that representations to be made before the Senate Committee should be presented as a joint statement of the American Council on Pharmaceutical Education, the American Pharmaceutical Association, the American Association of Colleges of Pharmacy and the Commission for Professional Manpower for Pharmacy. Embodied in the statement was a recommendation made on behalf of the American Association of Colleges of Pharmacy to the effect that the requirements for pharmaceutical manpower necessitate continuance of students now enrolled to the completion of their courses and graduation, and that in order to supply the minimum number of replacements of pharmacists required by the profession and the drug industry annually, in accordance with the actuarial replacement figure of 3.1 per cent, a minimum of 4,000 students should be admitted to the freshmen class in colleges of pharmacy in 1951. The joint statement presented by Dr. Fischelis before the Preparedness Sub-Committee of the Senate Armed Services Committee on January 30, was later supplemented by tables of statistical data prepared by the Chairman of your Executive Committee dealing with enrollment, and degrees conferred, at both the undergraduate and graduate levels by the schools and colleges of pharmacy covering the period from the academic year 1931-32 to the year 1950-51 inclusive.

On February 21, 1951 the Chairman of the Executive Committee sent to the Honorable Carl Vinson, Chairman of the Armed Services Committee of the House of Representatives, a communication with which were enclosed copies of the joint statement presented before the Senate Committee and the statistical data on enrollment and degrees conferred. At this time, the Armed Forces Committee was holding hearings on H.R. No. 1752, the House of

Representatives counterpart of S.F. No. 1, containing the proposals for amending the Selective Service Act.

Under date of March 22, 1951, questionnaires were sent out by the Commanding General, Air Training Command, Scott Air Force Base, Illinois, to a number of member colleges to determine the interest and capabilities of these institutions in offering a training program for pharmacy technicians, who were to be later assigned duties as dispensing pharmacists in the Air Force hospitals and dispensaries at home and abroad. The proposed course was for sixteen weeks and consisted of six hours of class and laboratory instruction five days per week, and was tentatively scheduled to begin May 7, 1951. The outline implied that the work was to be so organized that a new class could be accepted at the beginning of each week, and no terminal date was given for the program.

After consulting with President Schaefer by telephone, the Chairman of the Executive Committee referred this matter to the Executive Committee, requesting ballots to be returned by telegram on proposals to authorize (1), the issuance of a letter to all schools and colleges of pharmacy recommending postponement of responses to the questionnaires until the officers of the Association could negotiate with the officers of the United States Air Force responsible for authorizing this program, for the purpose of attempting to convince them that the program was unnecessary and inadequate as a means of providing safe dispensing service for the Air Force and (2), to approve the travel expense necessary for officers of the Association to confer with the Air Force officials. The Executive Committee approved both proposals unanimously.

Accordingly, on March 30, 1951, a letter was sent to all schools and colleges of pharmacy requesting that they refrain from submitting responses to the questionnaire until the outcome of our negotiations with the Air Force could be learned. On April 9, 1951, President Hugo H. Schaefer and the Chairman of your Executive Committee, accompanied by Dr. Robert P. Fischelis, Secretary-Manager of the American Pharmaceutical Association and Chairman of the Commission on Professional Manpower for Pharmacy, conferred with General Edward J. Kendricks, Director of Medical

Staffing and Education, Office of the Surgeon General, Headquarters, U. S. Air Force, and with members of his staff at the Pentagon in Washington.

When it was pointed out to General Kendricks that in all probability, enough pharmacy graduates of the class of 1950 had volunteered for service in the Air Force to fill the quota for pharmacy technicians, then estimated at 150, we are informed that these men had been classified and assigned to other branches of the Air Force and could not be considered as available for assignment to pharmaceutical duties. He further stated that the Air Force quota for appointment of persons holding degrees in pharmacy to commissioned rank as pharmacists in the Medical Service Corp was completely filled, and that all applications were currently being returned to the applicants with a statement to that effect.

It was then proposed that an effort be made by the American Association of Colleges of Pharmacy to determine how many of the members of the 1951 graduating classes in pharmacy would be willing to volunteer for enlistment in the Air Force within 30 days after graduation, provided they were guaranteed assignment to pharmaceutical duty following the completion of basic training. General Kendricks agreed to abandon the pharmacy technicians' training program in the event that enough graduate pharmacists could be obtained to meet the quota proposed for pharmacy technicians.

As you know, this survey was carried out by the Chairman of the Executive Committee, and the final report, based upon responses received from 71 schools and colleges of pharmacy (59 member colleges and 12 non-member colleges) showed that 245 graduates of the classes of 1951 had signified their willingness to enlist in the Air Force immediately after their graduation in June, and that 333 additional persons in the same classes were definitely interested in volunteering, although not fully decided at the date. Under date of May 2, 1951, word was received from Colonel John R. McGraw, Deputy Director, Medical Staffing and Education, Office of the Surgeon General, to the effect that plans for the establishment of the pharmacy technicians' training program had been abandoned.

Although we do not have precise information of the number of men from the 1951 graduating classes who actually enlisted in the Air Force it is safe to assume that most of those in the first group of 245 meeting the physical qualifications, are now in the service. From scattered reports coming from a few schools, it also appears that a considerable number on the "probable" list have also volunteered. It is our understanding that the Air Force accepted all qualified volunteers who applied for enlistment. Word has been received from the Air Force that all enlistees without previous armed forces experience were assigned the rank of Corporal, and those with previous service were given the rank of Sergeant.

Although there has been criticism in some quarters of the action taken, we believe such criticism is based upon an incomplete understanding of all the facts involved. Certainly the Executive Committee was unanimous in its decision that something should be done, if possible, to forestall the organization of the proposed training program for pharmacy technicians, on the ground that the participation of member colleges in such a program represented a distinct lowering of educational standards, and that the program, as planned, was inadequate to meet a situation in which trainees completing this program would be assigned responsibility for dispensing drugs and medicine to members of the Air Force in dispensaries and hospitals. The officers of the Association who negotiated with the Air Force officials make no apology for their action in the matter; on the other hand, they are convinced that their decisions were sound, and that they resulted in one of the outstanding achievements of the Association during the past year in promoting the cause of pharmaceutical education.

Your judgment of the actions taken should be based upon the following considerations:

1. The Air Force was not, at the time the question arose, and is not now, accepting applications for commissioner rank in the Medical Service Corps from graduate pharmacists.
2. In the Medical Service Corps of both the Army and the Navy, applications for commissions from pharmacy graduates were subject to long delay of six months or more, with no assurance as to when an applicant would be appointed.
3. A vast majority of the 578 June graduates who either volunteered or expressed interest in volunteering to enlist in the Air

Force were faced with induction into the Army within 30 to 60 days after graduation, since most of them had been deferred to enable them to complete their school year, with no possibility that their training in pharmacy would be recognized in their assignment to duty in the Army.

4. The Air Force does not receive any men through Selective Service, but depends entirely upon voluntary enlistment.
5. The Executive Committee and the officers of the Association were confronted with an emergency, not a theory, and were compelled to act quickly in reaching decisions if the organization of a pharmacy technician's training program in the Air Force were to be averted.
6. As a result of the actions taken, the Air Force is now provided with well trained pharmacists, thus assuring the same high standard of pharmaceutical service to the personnel of the Air Force that is available to the civilian population.
7. The pharmacy graduates entering the Air Force are afforded the opportunity of rendering the maximum service to their country within their capacities by virtue of their assignment to duties for which they are fully qualified by their interest, aptitude, experience and education.

It is impossible to include in this report, because of the limited time available for its presentation, a detailed discussion of all of the items of business which were considered by the Executive Committee during the year, or even a listing of them by topic. A few of the important items on the agenda for the sessions of the Committee being held here at Buffalo include: reconsideration of Resolution No. 4, adopted at the Atlantic City meeting, requiring a minimum of two years of enrollment in an accredited school or college of pharmacy of persons with a foreign background in pharmaceutical education; problems arising as a result of inspection and accreditation, by the Department of Education of the State of New York, of schools and colleges of pharmacy located outside the state; problems arising in the enforcement of Section 6b of Article I of the By-Laws and general consideration of the whole problem of acceleration of the teaching program; the issuance of a brochure on pharmacy for the use of member colleges in responding to inquiries of prospective students; feasibility of preparing a roster of professional personnel and the possibility of establishing a placement bureau; the report of the Sub-Committee on the cost of estab-

lishing the office of a permanent secretary; and the determination of the subject matter area for the 1952 teachers' seminar.

It is generally agreed by members of the Executive Committee that the most important item coming before the Association at this meeting is the proposal to amend Article I of the By-Laws to make mandatory a minimum five-year course, beginning July 1, 1956. Pharmaceutical education stands at the crossroads, with its future depending upon the decision you make on this very important issue.

The interim report of the Committee on Constitution and By-Laws was incorporated in a letter which was sent to all member colleges on January 25, 1951. Because of a misinterpretation of the effective date of the so-called five-year program which was being circulated, the Chairman of the Executive Committee felt compelled to issue a second general letter, dated April 9, 1951, which should have resolved all doubt that it was the intent of the proposed amendment for the proposed five-year program to begin on or after July 1, 1956, as was clearly stated in the report of the Committee on Constitution and By-Laws. After the mailing of this letter, which also appeared on Page 259 of the April, 1951 issue of the *American Journal of Pharmaceutical Education*, the Executive Committee was distressed to hear reports and rumors to the effect that this misinterpretation was still being used by opponents of the five-year program as propaganda against its adoption. In order that there be no misconception concerning this matter, reference is again made to a sentence taken from the report of the Committee on Constitution and By-Laws which reads as follows:

"It (Paragraph d) would make mandatory the adoption of a program of five collegiate years of study beginning July 1, 1956."

The Chairman of the Executive Committee wishes to express publicly his personal appreciation and thanks to the other officers and to the members of the Executive Committee for the splendid cooperation he has received from them. In every instance, each of them has responded to every demand made upon him, and their counsel has been characterized by its wisdom, sincerity and honesty. It has been a great privilege to have shared with such outstanding leaders in pharmaceutical education the responsibility of carrying out the activities of the Association during the past year.

JOSEPH B. BURT, *Chairman*

Report of the Committee on Curriculum

The Committee, at its meeting of June 1-2, 1951, discussed the data and implications of a number of pertinent topics suggested in the several reports of the Pharmaceutical Survey. They were: (1) The Selection of Pharmacy Students, (2) The Evaluation of Student Achievement in College, (3) College Supervised Experience as a Teaching Function, (4) Continuation Studies.

The problems of selection and evaluation of students have been under study for a long time by very able committees of this association. The Pharmaceutical Survey conducted an investigation of the predictive value for survival during the first two collegiate years of a selected battery of tests. The results of these studies have appeared in two monographs by H. H. Remmers and N. L. Gage, Monograph No. 1, *The Abilities and Interests of Pharmacy Freshmen*, (1948) and Monograph No. 3, *Student Personnel Studies of the Pharmaceutical Survey*, (1949). These as well as a third publication by H. H. Remmers and A. J. Drucker, *Predicting Success in Pharmaceutical Education** deal also with the problems of evaluating academic achievement by way of a comprehensive senior examination.

The Committee on Curriculum has nothing to add in the way of factual studies on these two topics. It wishes to express its concern about the necessity for continued study and refinement of the tests used to predict not only academic survival but also professional survival and growth. Remmers and Gage have pointed out the way to the things which need to be done on a continuing basis. It is the hope of the Committee that ways and means may be found to do them. It must be pointed out that the ways are equally as important as the means. The only way in which new and improved tests can be proven is by the cooperation of our member colleges in giving the tests to their students and keeping adequate records on those students so that the tests and the items may be validated.

The tests which were studied by Remmers and Gage were admittedly more reliable in predicting subsequent grades in the non-

**Amer. J. Pharm. Educ.*, 15, 149-171 (1951)

pharmaceutical subjects of the curriculum. When the time arrives that one or more years of collegiate education is required for entrance to the professional curriculum, it will become important to have tests which will more accurately predict success in the professional curriculum and in practice.

It is suggested here that this Association, through the efforts of the faculties of the member colleges:

- (1) Continue the collection of data permitting the study of the degree of reliability of existing objective tests in predicting satisfactory progress in the professional curriculum.

One plan for such a continuing study was proposed by Remmers and Gage*. Perhaps this or another may be found feasible.

- (2) Make a study of the degree of reliability of scholastic and collegiate grades in predicting satisfactory progress in the professional curriculum.

This would afford an opportunity to compare the relative predictive reliability of one pre-professional year with that of two pre-professional years.

- (3) Make a re-study of the personal traits which contribute to outstanding performance in the several phases of pharmaceutical activity.

A list of such traits is a part of the Commonwealth Fund Study by W. W. Charters, et. al.**.

- (4) Seek advice on or make a study of methods of determining by objective tests or interviews, whether the applicant for admission to the professional curriculum has the traits of personality and character which have been shown to be characteristic of outstanding practitioners of pharmacy.
- (5) Continue the development of the comprehensive achievement testing program begun by the Pharmaceutical Survey.

The 1949 report of this committee*** briefly outlined a list of objectives which, in its judgment, a student of pharmacy should achieve as a result of experience gained in a retail pharmacy. It was stated at that time that—

"a way to achieve values of professional significance from the so-called 'practical experience' is for the college of pharmacy to assume the responsibility for the achievement of the objectives, select suitable retail stores in which they may be obtained, appoint staff members to supervise the training, and accept the values as elective credit toward graduation".

*Monograph No. 3, 81-83, (1949)

**Basic Material for a Pharmaceutical Curriculum, McGraw-Hill, 1927, p. 105-110.

***Amer. J. Pharm. Educ. 13, 500 (1949).

Considerable interest has been shown in the idea and it was considered in order to present an elaboration of the topic with additional ideas as to how such a plan might be implemented.

The principle of coordinating academic instruction with practice in the field has been applied generally by schools of education (practice teaching), schools of medicine (clerkships, externships, internships), by a small number of colleges of engineering (e.g., University of Cincinnati, Northwestern University, et al.), by some professional curriculums (Forestry, Mining, Microbiology)* and to a limited extent, by colleges of pharmacy who require Senior students to serve some time in hospital pharmacies, professional pharmacies* or student health services and graduate students to serve an internship in hospital pharmacy. To the extent that such coordination has been carefully planned by the faculty the operation of the plan has usually been found to be satisfactory to students, faculty and preceptor.

The applicability of this type of instruction in cooperation with retail pharmacies has been the subject of frequent study and a few trials in colleges of pharmacy in past years. At one time, the University of Wisconsin had a two credit course called "Drug Store Experience" in which students were required to spend several hours each week in retail pharmacies. In the judgment of a member of that faculty, this course fell short of the values desired for such experience through lack of time and insufficient planning of the course. The so-called Washington Experiment has been mentioned (*loc. cit.*) and more recently the University of Utah, College of Pharmacy has made a trial of a course involving this principle in a limited area of instruction**.

The committee is aware that any plan of operation for an unproven procedure must be received subject to reservation as to its completeness, validity, and reliability. None of these attributes can be achieved without subjecting the procedure to the test of long use. The committee is convinced that there are unrealized values in the practical experience which could be achieved if this part of the professional training were given the attention it merits by the college faculties. The following general principles and plan are of-

*Rising, L. W., the Washington Experiment, *Amer. J. Pharm. Ed.* 11, 262 (1947)

**Swinyard, E. A., and Hiner, L. D., An Experiment in Teaching Drug Store Management at Utah, *Amer. J. Pharm. Ed.*, 15, 22-27 (1951)

ferred as a first approximation to what, it is hoped, will grow into a workable plan of operation for the achievement of sound values for future pharmacists.

It is a generally accepted principle that a professional curriculum should comprise a modest number of elective courses in addition to the basic core of required studies. In the 1949 report of this committee, the suggestion was made that one of several elective programs might consist of a plan for supervised experience in a retail drug outlet. It is desired to re-state, before proceeding with an elaboration of the plan, that the committee recommends the plan as a desirable *elective* program; elective among the several colleges and conditionally elective within the college curriculum.

It is understandable that a college faculty might decline to recommend the adoption of such an elective program for a variety of reasons, any one of which would be valid for that college and indisputable in the circumstances. Another faculty, in a different environment might see, in some adaptation of the plan, values which were achievable and valuable enough to compensate for the difficulties which would surely present themselves.

The adoption of a plan of supervised experience by a college should be as one of the elective sequences available to its students. A student who wishes to qualify as a professional pharmacist should be advised to elect it as part of his training. Once started in the sequence, he should be required to complete it at a performance level in keeping with the standards of the college for all its graduates. In this respect, the plan is a conditional elective within the curriculum.

It is conceived that the period of college supervised experience will be accepted as a part or all of the experience requirement for admission to licensure. It is *not* thought that all State licensing boards would require or recognize such experience exclusively. A student who made a different election while in college would need to meet the legal experience requirement in another approved way. It is likely that the majority of students who are preparing for licensure would elect a plan of supervised experience but the pathway to licensure need not be closed to the student who elects a different sequence in college but who later wishes to become a licensed pharmacist.

General Principles

The college of pharmacy faculty must take the initiative in developing the program. It must (a) determine the objectives to be achieved by the student, (b) organize a program by which these objectives may be achieved, (c) seek out qualified and willing preceptors, (d) orient the preceptors within the program and inform them of their duties and responsibilities, (e) provide for adequate supervision of the program, the students and the preceptors, (f) provide means of evaluating the results of the program, (g) assign suitable collegiate credit for the program.

Objectives

The over-all objective of the college of pharmacy in a program of supervised experience is to afford an opportunity for the student to become acquainted with retail pharmacy as it is practised, under such conditions as are likely to furnish the maximum instruction in a minimum of time. The benefits which the student will derive from such experience, like the values derived from the college instruction on the campus, are largely dependent upon the care with which the program is organized, the quality of direction furnished by the preceptor and the willingness of the student to learn.

As a result of a well balanced and well directed program, it is intended that the student achieve, among other things the following benefits:

1. Ability to establish and maintain proper customer-pharmacist relationships.

The responsibility for instruction in these qualities is largely that of the preceptor. The student should be permitted to observe and to practice such things as: (a) a professional technique in receiving the prescription by telephone, from the patient or from a member of the patient's family; (b) a technique of helpful selling of drugs and drug sundries; (c) how to explain to the customer, in such a manner as to gain his cooperation, the regulations regarding the dispensing of dangerous drugs; (d) how to transmit to the customer information on the therapeutic implications of drugs which may be sold without prescription but which may be potentially harmful if misused.

2. Ability to establish and maintain proper inter-professional relationships.

Every opportunity should be utilized by the preceptor to introduce the student to members of other professional groups who visit the pharmacy. The student should be encouraged to visit with these persons on a basis of professional and social interest. When the preceptor makes professional calls on members of other professions, the student should be invited to accompany him and, as poise and experience is gained, make such calls on his own responsibility. The student should be invited to accompany the preceptor, occasionally, to service club meetings or inter-professional society meetings. The student should be required to formulate and submit for discussion some form of inter-professional communication such as a letter or pamphlet embodying a professional promotion or institutional advertising.

A study of the Public Health Department of the community and of other public or voluntary agencies concerning themselves with public health and welfare is an excellent way to introduce the student to the idea of inter-professional cooperation. At the same time, it establishes another fund of information which can be valuable in promoting pharmacist-customer relationships. A suggested study of such agencies is contained in Appendix A—Assignment No. 4 of this report.

3. Ability to establish and maintain proper intra-professional relationships.

The student should be encouraged to attend meetings of local pharmaceutical associations. The preceptor should assume the responsibility for introducing the student to the members and guests. Individual visits to competing pharmacies should be made and the student should be made to feel that he is a member of a professional community, which, while competitive need not be antagonistic to other members.

4. Gain confidence, ability and dispatch in prescription practice.

The student, under the guidance of the preceptor, should be required to receive, fill, check, price, package and deliver to a waiting patient a sufficient number of prescriptions each day so that by the end of his training period, he may have acquired an adequate skill and poise in this professional operation. The kind and number of prescriptions to be filled should be agreed upon by

the preceptor and the college instructor in charge of the program. The full value of the prescription practice cannot be achieved unless the student devotes some thought to each experience. In some States, the Board of Pharmacy requires formal reports on prescription practice. Where this is required, of course it should be done. In the absence or presence of such a requirement, the college instructor and the preceptor should require a report.

An example of a study of this kind with a suggested set of directions will be found as Appendix A—Assignment No. 1 of this report.

5. Gain familiarity with brand names and package types of drugs, proprietaries, bacteriologicals and biological specialties.

A regular and consistent study of such products seems the most efficient way to acquire familiarity. A suggested series of studies and a form for recording information is contained in Appendix A—Assignment No. 2 of this report.

6. Gain familiarity with products and materials classed as drug sundries, health and sick room supplies.

A suggested series of studies and a form for recording information on these types of products is contained in Appendix A—Assignment No. 5 of this report.

7. Become acquainted with the mechanics of ordering and inventorying narcotic drugs.

This can best be done by practice. The suggested Assignment No. 3 of Appendix A is intended to afford the opportunity.

8. Learn a method and the importance of establishing an efficient routine for handling the essential details of store housekeeping.

The preceptor should assume full responsibility for not only having a satisfactory plan for these details but also for calling the attention of the student to the reasons for the routine in the particular circumstances. Discussion and suggestion should be invited.

9. Gain information about the seasonal recurrence of demands in medication and merchandise and the importance of anticipating such demands.
10. Learn the importance of buying merchandise in proportion to the sales volume of the store so that the inventory remains in balance.

An example of a study plan and a form for recording information is contained in Appendix B of this report.

11. Gain in ability to make decisions regarding purchasing, store arrangement and financing.

It is not suggested that the ability to make infallible decisions can ever be acquired. What is suggested here is that the student be invited to discuss these matters on an impersonal basis with his preceptor and the college instructor. If the preceptor is so inclined, he may use his own store and his own experience as examples.

Organization of the Program

A. Time allotment—In the opinion of the committee, the optimum time to be devoted to the experience program is six months. A shorter time than this would be insufficient to orient the student to the establishment and afford time for reflective absorption of the lessons taught. A longer time may, eventually, be shown to be desirable but it is believed that the principles of retail store operation may be outlined in a six month period.

B. Sequence in the curriculum—It is believed that the best values from the experience could be achieved if the student had successfully completed all of the basic science courses and a major portion of the applied professional courses, including at least one semester of dispensing pharmacy. It is suggested that the student has background enough at this point in his education and will be sufficiently motivated to abstract maximum benefit from the experience. Such a student would be sufficiently mature to be acceptable to a preceptor for employment in his store.

After completing six months of supervised experience it is suggested that the student return to the college for another semester of academic instruction before receiving his degree. During this last period, the staff of the college should discuss the studies made during the experience period, bringing together the individual problems and findings of the students to the advantage of all. Opportunity would be offered in this period to complete the academic curriculum as planned.

It will be noted that it is not suggested that the supervised experience should substitute for any part of the necessary academic curriculum but would be an extension and addition to it.

C. *Administrative Organization*—Since the experience is to be supervised by the college of pharmacy, it is essential that all who have a part in the administration and instruction must be regularly appointed members of the college staff. Administrative authority would proceed from the Dean of the college through the department of pharmacy and the Field Director of Supervised Experience to the preceptor. It is possible that the Field Director, in some situations, might be a member of the Extension Division of the University. In such an instance, it is to be assumed that he would work cooperatively with the department or professors of Pharmacy and Pharmaceutical Administration in the organization of the material.

D. *Qualifications and Responsibilities of the Field Director*—As a minimum, the Field Director should have the academic qualifications of a staff member of professorial rank. He should have the personal qualities and enthusiasm which would make him a welcome visitor to the retail establishments which come under his observation. The position has great possibilities for developing cordial college-industry relationships. He should have the immediate responsibility for the operation and supervision of the program. He should visit at frequent intervals the pharmacies employing students, consult with the preceptor and, by consultation and appropriate examination of the student's records and reports, determine the progress being made by the student.

E. *Qualifications and Responsibilities of the Preceptors*—Preceptors should be selected from establishments wherein sufficient professional as well as general practice is available to furnish an adequate experience to the student. Preceptors must be persons who are willing to devote sufficient amounts of time and the time of their establishment to personal guidance and consultation. If they are not employers, they must secure the consent of the employer to participate in the program. It is assumed that the educational background, the personal qualities of the preceptor and the general tone and reputation of the establishment will meet the standards and requirements of the college.

The preceptor will supervise the activities of the student in training in such a way that the student becomes familiar with the professional and commercial aspects of pharmacy as practiced in

that location. He should utilize the student's professional capabilities to a maximum and give him every opportunity within the limitations of the store and the community, to develop professionally. The preceptor will evaluate the student's achievement and make frequent reports on this to the college through the Field Director. The preceptor-employer will accept the responsibility of payment of the agreed compensation to the student.

F. Responsibilities of the Student—The student obligates himself to a period of self-instruction by doing. He will receive guidance and information from his preceptor but the enduring values of the experience will depend upon his willingness to accept guidance and to thoughtfully study the experiences provided. He should discharge his duties to his preceptor to the best of his ability for the entire period of the assignment. If the State Board of Pharmacy requires any special registration or reports for his experience, the student should comply with all regulations.

G. Orientation and Preparation of the Preceptors—Persons selected for appointment as preceptors should be asked to participate in an organized training period of two or three days duration in which the training program should be presented and thoroughly discussed. The mutual responsibilities of the college administration, the field director, the preceptor and the student should be fully outlined and agreed upon.

H. Compensation During the Period of Experience—It is recognized that the student will render a worth while service to the preceptor-employer during the period of experience for which compensation should be paid. The preceptor will make a contribution to the student's education which must also be considered. The number of hours in service and the compensation to be paid cannot be determined except thorough study of the individual situation and agreement by the interested participants. In general, it would seem advisable to have a uniform rate of compensation for all students from the same college in the same type of community, i.e. in all metropolitan situations and in all small city situations. Any differences in compensation would be conditioned, in part, by differences in costs of living in the community selected.

I. Evaluation of the Program—It is suggested that the records of factual data collected by the student in training be sub-

mitted first to the preceptor and after approval by him, to the Field Director at pre-determined intervals. Reports called for by the several assignments would follow the same procedure. Evaluation of the experience can be made by conferences on the job and, upon the return of the student to the campus by suitable examinations and presentations in seminar or discussion groups.

J. Assignment of College Credit—The program, to be effective must be conducted under the supervision of the college and the performance standard be equal to that of any laboratory course in the curriculum. A program of the quality and extent outlined here might be assigned a value of eight to twelve semester hours.

K. State Board Recognition—The experience gained under a college-supervised plan offers a systematic and purposeful approach to the values which are the justification for the apprentice system. It should provide for all of its participants the high type of experience which, under an unorganized experience requirement, is available only to a fortunate few. The preceptors will be qualified under the law to act in that capacity so that no changes in State pharmacy laws should be required in most instances. Wherever an existing law prevented the recognition of the experience because it was obtained while the apprentice was enrolled in college, the college administration could recommend to the pharmacists of the State that the restrictive portion of the law be modified to permit the State Board to recognize such experience. It is suggested that the details of any such plan instituted by a college be studied in relation to the regulations of the State Board, the State Pharmacy laws and the recommendations of the National Association of Boards of Pharmacy. The approval of the State Board is not only necessary from the legal standpoint but it is highly desirable that the college have the enthusiastic cooperation of the Board members as leaders of the pharmaceutical community.

Recommendation

It is recommended that this Association approve experimentation by member colleges in the development of elective plans of College-supervised experience, for which credit toward graduation may be given. It is the sense of this recommendation that plans which require the continuous employment of the student by a selected

preceptor for a period of time equal to one semester (or quarter) or longer, should only be instituted as a part of a curriculum longer than the present four-years-after-high-school curriculum.

Continuation Studies

A number of colleges have organized programs of an informative nature which they present for the benefit of pharmacists who will avail themselves of the opportunity. In some instances, the information is supplied by means of bulletins, pamphlets and printed cards which are mailed to pharmacists. In others, the program is brought to the practicing pharmacists in local meetings; in still others, pharmacists are asked to assemble on the college campus or at another central place and are offered an intensive one to three days program.

In studying the several programs, the committee was able to summarize them according to the stated or apparent objectives of the programs. In brief, the pharmacists who attends the continuation study course or reads the printed matter expects to achieve one or all of the following.

1. Information on recent developments in pharmacy.
2. Information on recent developments in therapeutics, both human and veterinary.
3. Information on matters of public health.
4. Information on scientific discoveries which are not directly associated with pharmacy, but which potentially have a bearing on public health.
5. Information on the business administration of retail pharmacies.
6. Information on sales techniques.
7. Opportunity to acquire new techniques and skills resulting from advances in science and technology.

In the conferences, the information is usually supplied by means of lectures, demonstrations or panel discussions, in which the pharmacists in attendance take a passive part except for participation in the subsequent questions period. Practicing pharmacists are usually men conditioned to activity. It seems that a more attractive and stimulating program could be worked out by affording opportunity for the enrollees to try out under laboratory conditions some of the new ideas presented. A demonstrator may faultlessly perform a new technique, after many not so faultless trials

in private, and make the new pharmaceutical aid or the new technique look encouragingly simple. The pharmacist who returns to his store, away from the advice and example of the expert, may find the product or the technique discouragingly difficult. Had he the opportunity to practice under the direction of the demonstrator, he probably could smooth out these difficulties. The increasing use of laboratory methods of teaching is urged for these continuation courses.

Another modification of the continuation course which can be recommended for trial by more colleges is for the college to take the course to the pharmacists it seeks to stimulate. Repeated offerings of the program in locations which are accessible by automobile in no more than an hour's travel would stimulate attendance by pharmacists who hesitate to leave their pharmacies for periods of from two to three days. This would also reduce the housing problem on college campuses. Materials could be provided by the College of Pharmacy and laboratory and lecture hall space might be available in the local High School or college buildings for evening classes. Public notice of such courses for local pharmacists would serve to increase public esteem for them and for the college of pharmacy.

Details and procedures for the conduct of such professional programs will differ in the case of each college. Like other worthwhile projects, they require an investment of time, thought, and funds. The benefits to be derived by the professions are potentially great.

GEORGE L. WEBSTER, *Chairman*

Appendix A-1

ALLSTATE UNIVERSITY COLLEGE OF PHARMACY

Store Experience Assignment in Pharmacy Administration

Prescription Practice Study

It is expected that the student shall receive, complete and deliver to waiting patients, a sufficient number of prescriptions daily, to ac-

quire confidence, dispatch and skill in the performance of this professional service. The number of such daily experiences will vary with the nature of the prescriptions and the previous experience of the student, but it is suggested that the minimum number shall be ten and a maximum number shall be twenty. In no case should the number of prescriptions filled require more than half of the daily working time of the student. The time required for completing the forms may be within or without the working hours at the discretion of the preceptor.

Assignment No. 1. Fill in, on the form provided for the purpose, all pertinent information on each of the prescriptions filled by you each day. Place the completed forms in the binder provided for that purpose and preserve them for inspection and discussion by the preceptor and the college instructor.

Drug Product and Ingredient Study

The student should acquire familiarity with all items in the prescription department and other specialties which are permitted to be sold without prescription. A systematic survey of such items conducted at regularly scheduled times during the period of the supervised experience will promote the acquisition of this knowledge. It is suggested that an hour per day would suffice for a listing of an adequate number of items with some further study time devoted to collecting information not available on the labels of the preparations.

Assignment No. 2. Fill in, on the form provided for the purpose, all pertinent information on at least ten drug counter or prescription specialty items each day. Place the completed forms in the binder provided for that purpose and preserve them for inspection and discussion with the preceptor and the college instructor.

Narcotic Inventory and Order Forms

Assignment No. 3. With the advice and guidance of your preceptor, complete a narcotic inventory blank and a narcotic order form (actual or reproduction) and keep a permanent record of the procedure for inspection and discussion with the college instructor.

Public Health Study

Assignment No. 4. Make a survey of the public health facilities afforded by the city or town in which you are working. Prepare an outline of the organization or organizations (municipal or voluntary) which are concerned with public health and describe the functions of each. Secure copies of the public health code and/or regulations which are currently in force. Preserve these data for inspection and discussion with your preceptor and the college instructor.

Sick Room Supplies Study

Assignment No. 5. Make an analysis of the sick room supplies department of the store.

Complete the form provided for the purpose using a separate form for each type of item, e.g., Hypodermic needles, hot water bottles, etc., but list as many sizes and manufacturers as possible on each blank. Use as many blanks as needed to complete the listing. Under "Remarks" list any pertinent information you can obtain which would enable you to advise a customer as to a choice between different qualities, sizes or designs.

Appendix B-1

Store Experience Assignments in Professional Practice

General Directions

In compiling the data for each of the numbered assignments listed below, fill in the record form according to the following directions:

- a. Check in the appropriate boxes appearing in the upper left and right corners of each chart used, to indicate the type of merchandise studied. Fill in the name and address of the store, the preceptor's name, your name and the number of the assignments which should correspond with the numbers listed below.
- b. Write the name of the items selected for study in the record form, entering one name at the head of each item column.
- c. **Enter weekly**, on the appropriate line for each item:
 - (1) the sales (unit sales, not dollar volume sales); (2) inventory (taken once each week); (3) reorder quantities; (4) number of shipments received during the week. These figures will form the basis of the conclusions written up in the report at the end of the experience period.

Seasonal Merchandise

Assignment No. 1. With the advice of your preceptor, select not less than six items of commercial merchandise (non-drug items) which you believe to be at or approaching the peak of their seasonal sales period and complete the chart as indicated above in the general directions. Repeat the foregoing assignment for not less than six prescription specialty items. Use as many chart sheets as may be necessary. Repeat the foregoing assignment for not less than six drug counter items.

Assignment No. 2. Following the procedure outlined in the general directions and Assignment No. 1, collect data for commercial merchandise, drug-counter items, and prescription specialty items which you believe to be at or approaching the low point of their slow selling or "off season" period.

Non-Seasonal Merchandise

Assignment No. 3. Following the procedure outlined in the general directions and Assignment No. 1, collect data for commercial merchandise.

dise, drug counter items, and prescription specialty items which you believe to be consistent (not necessarily fast) in sales.

Large Inventory Merchandise

Assignment No. 4. Following the procedure outlined in the general directions and Assignment No. 1, collect data for commercial merchandise, drug counter items, and prescription specialty items of which large inventories are carried.

REPORTS

Prepare a recapitulation of the information compiled on the record form sheets during the semester for each assignment. The organization of the recapitulation is an important part of the experience. The recapitulation should include, as a minimum, the following information: Report on Assignment No. 1—Peak-Season Merchandise.

- a. What general change in purchased quantities occurs as the "off season" approaches?
- b. What general change in inventory quantities occurs as the "off season" approaches?
- c. What general change in reorder frequency occurs as the "off season" approaches?
- d. List any notable exceptions to the above general changes.
- e. In your opinion, do the general changes noted in a, b, and c, above, occur soon enough and adequately enough? Do these changes follow the sales pattern or do they anticipate the sales trend?
- f. Indicate any general trend in the rates of turnover of these items.
- g. Indicate any general trend in the stock/sales ratios of these items.
- h. What relationship, if any, is exhibited between the rates of turnover and the stock/sales ratios of these items?
- i. Which of these items, if any, are entering their slack season with excessive inventories? Discuss this with your preceptor to determine reasons for this. List the reasons in two groups: (1) general and (2) those which apply specifically to (a) commercial, (b) drug counter, and (c) prescription specialty items.

Report on Assignment No. 2—Off-Season Merchandise.

- a. What general change in purchase quantities occurs as the "peak season" approaches?
- b. What general change in inventory quantities occurs as the "peak season" approaches?
- c. What general change in reorder frequency occurs as the "peak season" approaches?
- d. List any notable exceptions to the above general changes.
- e. To what extent do the changes noted in a, b, and c, above, anticipate the sales trend?

f. List any items the manufacturers of which stimulate pre-season planning and purchasing on the part of the retailer, and indicate what incentives are used.

g. Compare the rates of stock turnover for the items in (f) with the turnover rates for the items in 1. Peak-Season Merchandise.

h. What pre-season plans are made for the buying and stocking of Christmas merchandise? How early are these plans made?

i. Construct a merchandise budget for seasonal merchandise, planning sales, stocks, and purchases and coordinating peak-season and off-season items so that capital is transferred from one to the other as the peak-season is passed for one item and is approached for another. Use a sufficient number of items to make a coordinated plan.

Report on Assignment No. 3—Non-Seasonal Merchandise

a. Are the sales of these items consistent? If not, to what extent do they fluctuate?

b. Have any of these items become "seasonal" items since they were selected at the beginning of the semester? If so, what caused the change?

c. How do the stock turnover rates for these items compare with those for the items under 1. Peak-Season Merchandise and under 2. Off-Season Merchandise? (Use turnover rates determined on an annual basis if available).

d. Are any of these items bought in reorder quantities smaller than what is normally sold during the credit period (usually 60 days)? If so, determine why they are bought in such small quantities.

e. Are any of these items stocked or bought in quantities larger than would normally be sold in 60 days? If so, determine why they are bought or stocked in such large quantities.

f. For items listed under (d) and (e) above, set up a model stock plan indicating maximum and minimum stocks, reorder points and optimum reorder quantities for each item. If no items are listed under (d) and (e) above, set up a model stock plan showing actual figures for maximum and minimum stocks, reorder points and reorder quantities for each item reported on record form number 3.

Report on Assignment No. 4—Large-Inventory Merchandise

a. Do the sales of these items justify the large stocks carried. If not, list the items carried with excess inventories.

b. Are any of these items seasonal with the large stock being carried over through the "off season"? If so, ascertain how this happened.

c. Do any of these large inventories involve obsolete items? If so, name the items and give an estimate of their value.

d. Do any of these large inventories involve reserve stocks which remain untouched while additional supplies of the same items are being ordered to replenish the forward or selling stock? If so, determine why this is done.

e. Discuss with your preceptor the overhead costs of carrying large inventories and how large a quantity discount is necessary to compensate for that cost. Summarize the conclusion of this discussion.

ALLSTATE UNIVERSITY COLLEGE OF PHARMACY PRESCRIPTION PRACTICE STUDY

Received from:

Patient.....

Telephone.....

Other.....

No.....

Student.....

Preceptor.....

Date.....

Paste in Prescription Copy on Store Blank

Include Serial Number of Prescription

Active 1.....
Ingredient(s) 2.....

Prescribed
unit daily..... usual max.....

Dose 1.....

2.....

Principal 1.....

ther. use 2.....

Price.....

Filled and priced by..... Method of computing price:

Checked by.....

Remarks on compounding:

Remarks to or by pharmacist at time
of delivery of completed medication:

Appendix A

ALLSTATE UNIVERSITY COLLEGE OF PHARMACY
SICK ROOM SUPPLIES STUDY

Date.....

Item No.

Student.....

Preceptor

Name of Item: e.g. Hypodermic needles

Manufacturer 1. e.g. Beckton-Dickinson Co.
or 2. e.g. McGregor

Distributor

Mfr. No.	Size	Material	Quality	Unit Cost	Unit Sales Price	Use for which sold (usual)
1	1 in. 22 ga.	s. steel		0.00	0.00	
2	0.5 in. 24 ga.	c. steel		x.xx	x.xx	

Remarks:

Appendix B

Type of Merchandise

(Check one)

.....In Season

.....Off Season

.....Non Seasonal

ALLSTATE UNIVERSITY

COLLEGE OF PHARMACY

STORE EXPERIENCE

RECORD DATA FORM

Type of Merchandise

(Check one)

.....Commercial

.....Drug Counter

.....Rx Specialties

Store.....

Assignment No.

Address.....

Student.....

Preceptor.....

Student.....

[illegible]

Report of the Chairman of the Committee on Problems and Plans

In the early days of the life of this Committee it had many problems under study, but as time went on an ever increasing number of these problems have been assigned to special committees by the Association. This is as it should be for the more people that can be set studying our problem, the better. The strength of the Association is dependent upon and directly proportional to the activity of its members. As a result of this, in 1946 the Committee on Committees designated the duty of this Committee to be to bring before the Association problems pertaining to professional education and to education in general, with particular attention to those areas where general educational problems apply to pharmaceutical education; furthermore, it should define problems that pertain to pharmaceutical education and the welfare of the Association and initiate the study of such problems.

As a matter of fact, during recent years the Committee has devoted its energies to feeling out trends and trying to get a cross section of thought from those men actively engaged in teaching and research. It seems to the chairman that the most this Committee can do now, for the welfare of the Association, is to record views on the steps that should and can be taken which will advance the educational program and attain the objectives set by the New Horizon of The Pharmaceutical Survey.

Previous reports of this Committee have shown that a major interest of the membership is the improvement of their own teaching. There is no better way to promote pharmaceutical education.

This year the chairman refrained from using the formal questionnaire method. What he did do was to ask each committeeman to tell in his own way what he as an individual, or as a member of a small group, or what the Association as a whole could and should do at the present time to best promote pharmaceutical education.

To suggest a line of thought, the chairman gave a sample of his own thinking: "I am thinking of such a project as the 'Washington experiment' which injects new methods into the teaching

of dispensing which brings young men with idealism in contact with men of proved professional experience; I am thinking of such a project as the experiment now being carried on by the pharmacy staffs at the University of Minnesota, an experiment intended to stimulate the student to make the library a real teaching tool; I am thinking of possible methods of interesting the student in the study of pharmaceutical history that his professional morale may be fostered; I am thinking of methods that will increase the instructor's own interest and efficiency in teaching his subject such as the Plant Science Seminar has done for the pharmacognosists; I am thinking of how the moral responsibility and the civic obligations of the pharmacist may be impressed upon the student without his feeling that he is constantly being subjected to a sermon which he resents; I am thinking as to how the work of the American Association of Colleges of Pharmacy may be carried on in cases of violation without producing humiliating situations and bitterness; I am thinking what can be done to improve the quality of the material and its presentation in *The American Journal of Pharmaceutical Education*; and lastly I am thinking about how each of us can reduce our teaching to a system as simple and as effective as Pestalozzi used in the teaching of children, a system which revolutionized education and eventually found its way into every public school and became one of the foundation stones of modern progressive education."

It is impossible, in the time available at our annual meetings, to more than summarize the thinking of the group. The best that can be done is to give a brief resume of the major problems upon which our thinking and study should be concentrated. We expect to elaborate upon these points in *The Journal* during the coming months. The points are numbered for convenience of reference, and do not indicate the importance placed upon them.

1. More of the newer and younger members of the teaching staffs should be encouraged to attend the district meetings of the Board and Colleges and take part in the discussions. They should be made cognizant that they are vital members of the groups and have a part in shaping the destiny of the teaching and the practice of pharmacy.
2. The selection of students properly trained so they will be in a position to create a profession that will make progress along with the other health professions.

3. The creation of the office of permanent secretary. It is granted that for financial reasons this will be a problem for the future, but the goal must not become obscured.
4. A realistic plan for in-service training.
5. The problem of acceleration. Is there a need? Is acceleration a menace to sound education?
6. A testing program to measure student achievement and to use that measurement in student guidance.
7. The adoption of the prepharmacy requirement in order to have professional students of greater maturity and to permit of additional professional courses.
8. Confinement of summer classes to general educational subjects and not strictly professional subjects.
9. Some sort of method, perhaps a course, that would teach the student some of the basic every day niceties of life.
10. A rejuvenation of the plan advocated some years ago for the development of the speaker's tour for the spiritual and intellectual development of the teaching staffs.
11. How can some pharmaceutical educators be convinced that modern pharmacy is a science and well as an art and that pharmacy should remain the major subject of the pharmaceutical curriculum?
12. What will be the effect of a prepharmacy requirement upon the graduate program.
13. How to obtain unity between our two major national pharmaceutical organizations.
14. How to obtain intelligent control of the distribution of pharmaceutical manpower between the states.
15. Continuation of The Pharmaceutical Survey organization to make a complete survey of the economics of the pharmaceutical industry.
16. How to increase the supply of pharmaceutical personnel with specialized training; namely, the graduate students.
17. How can interest be increased in the mechanics of teaching.
18. National entrance examinations for entering students and national comprehensive examinations to be offered at the close of each year.
19. Qualifications of an institution to give graduate work.
20. How to achieve that combination of convictions and attitudes, springing largely from the heart, which we call "ethics".

We are well aware of the fact that many of these problems are now subjects of study by the various committees of the Association. Whether they are or not, these twenty points cover the problems which the committee consider most important for claiming our efforts at the present time.

The future usefulness of the Committee has been a matter of concern to the chairman. The title and original function of the committee was, of course, patterned after a similar committee of the American Council on Education. That organization has changed the name of their committee from Problems and Plans to Policy and Plans. The chairman has suggested, and it has been concurred in by several members, that because of a change in the trend of activities, this committee should be rechristened as the Committee on Policy and Plans. Perhaps even better it should be named the Committee on Problems and Policy. However, there may be something said in support of retaining a committee's name through a long period of years.

Another suggestion, made by a Committee member, concerns the personnel of the Committee. He feels that since many of the long time members of the Committee have entered the administrative field, they should be dropped from the Committee and replaced by younger men in the teaching field. The member making the suggestion has himself become a dean. The suggestion has some merit, although the chairman must say that these members have given most valuable service to the Committee. Nevertheless, we believe the Committee has a unique position among the committees. It gives an opportunity for young men, as they enter the teaching field, to become at once a member of a pharmaceutical forum and to have a part in the shaping of the program of pharmaceutical education. In future appointments to the Committee the President of the Association might well consider the wisdom of this suggestion.

The Committee has no recommendations to make which might only add to the chaos and confusion caused by the great mass of recommendations which are submitted annually. Rather do we feel that in presenting the major problems, which we think are "musts", the Committee has performed a major usefulness.

In closing the report, the chairman wishes to express his appreciation to each member of the Committee for the inspiration each has brought to him through the year and which has been a constant stimulus in the editing of *The American Journal of Pharmaceutical Education*.

RUFUS A. LYMAN, *Chairman*

Report of the Committee on Resolutions

August, 1951, Hotel Statler, Buffalo, New York

(Thomas D. Rowe, Chairman, Leroy D. Edwards, Stephen Wilson,
Pearl Dirstine, R. Blackwell Smith)

FROM THE PRESIDENT'S ADDRESS

1. **RESOLVED**, that it be the policy of the American Association of Colleges of Pharmacy to discourage the establishment of short pharmacy technician courses in all branches of the armed services; that we endorse the action of the Executive Committee which made it possible for the Air Force to obtain college of pharmacy graduates in sufficient number to meet its technical needs; and that we continue our efforts to obtain recognition in the form of commissioned rank for those entrusted with the performance of pharmaceutical duties in the armed forces.

This resolution was approved by the Committee on Resolutions and adopted by the Association.

2. **RESOLVED**, that the Association establish Associate Membership in our Association for non-accredited schools of pharmacy.

The Committee on Resolutions endorsed this recommendation in principle and in addition recommended that the tenure term of five years be the maximum limit for such membership.

The Committee on Resolutions recommended that this recommendation be referred to the Executive Committee. Carried.

3. **RESOLVED**, that we extend a vote of thanks to Dean Glenn L. Jenkins, Chairman of the 1951 Teaching Seminar Committee, and to Dean B. V. Christensen, Chairman of the 1950 Teaching Seminar Committee, for their excellent leadership and organizational work, as evidenced by the superior character of the respective seminars, and that we make every effort to continue this part of our Association program.

The Committee on Resolutions approved this resolution and it was adopted by the Association by a rising vote.

4. **RESOLVED**, that we extend a vote of thanks and appreciation to the American Foundation for Pharmaceutical Education for its financial support of several of our activities and for its scholarship and fellowship grants; that we congratulate the Foundation for its wise selection of Dr. W. Paul Briggs as its

Executive Secretary; that we pledge our full and continued support to Dr. Briggs and the objectives of the Foundation and that we urge the Foundation to continue its cooperative efforts with our Association in behalf of pharmaceutical education.

The Committee on Resolutions approved this resolution and it was adopted by the Association.

FROM THE PRESIDENT-ELECT'S ADDRESS

5. **RESOLVED**, that a statement be introduced in our By-Laws under Section 6 of Article I, permitting the awarding of a Bachelor of Pharmacy degree for the completion of a five-year course in pharmacy.

The Committee on Resolutions approved this recommendation and recommended that it be referred to the Executive Committee for further study and preparation of vote by the Association. Carried.

Other recommendations from the address of the President-Elect were consolidated with similar resolutions from other sources.

FROM THE EXECUTIVE COMMITTEE

6. **BE IT RESOLVED**, that Article I, Section 6 of the By-Laws of the American Association of Colleges of Pharmacy be amended by the repeal and deletion of paragraph b, and change in the designation of paragraph c to b.

The Committee on Resolutions approved this resolution and recommended that it be adopted and referred to the Committee on Constitution and By-Laws. Carried.

7. **WHEREAS**, a number of member colleges have been required by university or administration policy to adopt acceleration in the present emergency; and

WHEREAS, it is the unanimous opinion of the Executive Committee that disciplinary action should not be taken against these members; and,

WHEREAS, it has been proposed to repeal Section 6b of Article I of the By-Laws; and

WHEREAS, such action by the Association, however, is not to be construed as an endorsement of acceleration as sound education policy; therefore,

BE IT RESOLVED that the Association reaffirm its opposition to acceleration and feels that every means possible should be used to discourage it.

The Committee on Resolutions approved this resolution and it was adopted by the Association.

8. **RESOLVED**, that Resolution No. 4 adopted at Atlantic City requiring students with a background in pharmaceutical education from a foreign country, except Canada, to complete not less than two years of regular enrollment in an accredited member college of pharmacy to be eligible for graduation, be reaffirmed as a continuing policy of the Association.

It is further recommended that such students must have attained proficiency in the use of the English language before being admitted to said school.

The Committee on Resolutions recommended that no action be was adopted by the Association.

FROM THE DISTRICTS AND COLLEGES

Chairman Rowe stated that there were several resolutions from various districts which indicated opposition under present conditions to the proposed amendment to the By-Laws whereby the time required to earn the degree of Bachelor of Science in Pharmacy would be increased from four to five years. There was one which indicated approval for the proposed change. Inasmuch as a vote is to be taken on this question at the executive session later on this afternoon the Committee on Resolutions recommends that no action be taken now on any of these resolutions.

FROM DISTRICT NO. 1

9. **RESOLVED**, that District No. 1 requests the American Association of Colleges of Pharmacy to advise the American Council on Pharmaceutical Education to postpone temporarily, for the purpose of further study, the effective date of the Council's regulation requiring five departments in colleges of pharmacy. A similar resolution was presented from District No. 2.

The Committee on Resolutions recommended that no action be taken on this recommendation since the discussion at the Sunday night meeting indicated that the Council had already fulfilled this request.

DISTRICT NO. 2

In the the interest of public health and safety and due to the fact that in self-service stores adults and children may help themselves to drugs and medicines and poisons, the sale of which is not under the personal supervision of a registered pharmacist, therefore

10. **BE IT RESOLVED**, that we go on record as opposing the issuance of permits to conduct pharmacies for any type of self-service stores.

The Committee on Resolutions approved this resolution and recommended that it be referred to the National Association of Boards of Pharmacy. Carried.

11. **BE IT RESOLVED**, that this meeting record its approval of the need of practical experience as a requirement for registration as a pharmacist, and that a minimum of one year of practical experience, not concurrent with college education, be required, a portion of which preferably should be obtained subsequent to graduation from an approved school or college of pharmacy.

The Committee on Resolutions believes this resolution falls in the domain of another organization, therefore recommend no action. The recommendations of the Committee on Resolutions was accepted without voting.

There were a number of resolutions concerning acceleration which were not presented by the Committee on Resolutions because it was their opinion that they would be taken care of by the resolutions already approved from the Executive Committee.

DISTRICTS NO. 3 and 8

12. **WHEREAS**, retail pharmacy is represented by two strong national organizations, the A.Ph.A. and the N.A.R.D. and **WHEREAS**, it is indispensable that the will of the profession be expressed in one clear voice; therefore **BE IT RESOLVED** that every effort be made to bring about unity of purpose and action between the A.Ph.A. and the N.A.R.D. regarding future legislation.

The Committee on Resolutions approved this resolution in principle and recommended that it be referred to the two organizations.

The Secretary was instructed to transmit this recommendation to the two organizations directly concerned.

13. **WHEREAS**, the health and welfare of the civilian population may be endangered by the drafting of large numbers of College of Pharmacy students; therefore **BE IT RESOLVED**, that District No. 4 urge the directors of Selective Service to take into consideration the number of replacements needed in the practice of the profession.

The Committee on Resolutions approved this resolution in principle and recommended that it be referred to our representa-

tives on the Commission on Professional Manpower for Pharmacy.

14. **WHEREAS**, the boards and colleges of District No. 4 realize the unfavorable position of pharmacy, pharmacists and pharmacy students in relation to governmental and military practice; therefore

BE IT RESOLVED, that immediate action be taken to implement the Pharmacy Cadet Corps.

Chairman Rowe stated, at the time the resolution was passed in the district involved, there were rumors that additional cadet or ROTC units, as they are usually called, were to be established. It was later learned that these rumors were unfounded. As of now, the Army does not plan to expand the pharmacy unit. However, the Committee felt that the Association should be ever alert to future possible expansion, and therefore, the Committee on Resolutions recommended that the resolution be referred to the Executive Committee. Carried.

DISTRICT NO. 5

15. **WHEREAS**, the state licensing boards and also faculties of the college of pharmacy located in District No. 5 are vitally interested in providing the best health service at the most reasonable cost to the people of our state; and,
WHEREAS, the prescribing of therapeutics agents recognized by the U.S.P., N.F. and N.N.R. for the prevention and treatment of disease would substantially lessen the cost of medical care; and,

WHEREAS, the aversion by physicians, dentists and veterinarians to writing for these products is due to a large extent to insufficient and inadequate formal training in therapeutics and in the writing of extemporaneous prescriptions formulated to fit individual cases;

WHEREAS, it is acknowledged that only a very small amount of a junior or senior medical student's clinical training is devoted to therapeutics and the writing of prescriptions to fit the case history, and

WHEREAS, it is our opinion that medication should be prescribed to fit each individual case rather than an attempt to fit each case to an already pre-constructed formula, therefore

BE IT RESOLVED, that the Boards and Colleges of District No. 5 recommend to the curriculum committee of the medical schools in this district that consideration be given to

1. Devoting more time to therapeutic considerations during the last two years of formal medical education.

2. Teaching medical students to write prescriptions for U.S.P., N.F. and N.N.R. drugs for clinical cases or from case histories.
3. Placing such studies under the joint direction of the clinical professor and the professor of pharmacology.

BE IT FURTHER RESOLVED, that a copy of this considered resolution be transmitted to the American Association of Colleges of Pharmacy with the recommendation that, if approved by that body, it be transmitted to the American Association of Colleges of Medicine with their endorsement.

The Committee on Resolutions was in sympathy with the recommendation and would like to see more prescription writing and related material presented to medical students. However, it was their opinion that the medical colleges have curricular problems similar to those faced in pharmacy. Furthermore, they did not believe it to be the responsibility of this Association to direct the American Association of Medical Colleges as to what they should or should not include in their curriculum.

The Committee on Resolutions therefore recommended that the resolution be disapproved. Carried.

16. **BE IT RESOLVED** that the colleges of pharmacy take necessary steps to see that persons who have completed the pharmacy curriculum and fulfilled all requirements for graduation are promptly awarded the degree of Bachelor of Science or Bachelor of Science in Pharmacy when necessary to qualify for licensure, in order to be deemed eligible for examination and licensure as a pharmacist without further delay.
17. **BE IT RESOLVED**, that members of the N.A.B.P. take necessary action to enable each Board to deem persons who have fulfilled all requirements for graduation as being eligible for examination and licensure upon the certification of the faculty of the college that all academic requirements have been met and that the conferring of the degrees has been recommended by the faculty action prior to receipt of Bachelor of Science or Bachelor of Science in Pharmacy, when the award of such degree is unduly delayed.

The Committee on Resolutions approved in principle the idea represented by these two resolutions. They felt however, that the problems presented can only be solved by individual institutions and individual boards. The committee recommended that no action be taken on these resolutions. Carried.

DISTRICT NO. 6

18. **BE IT RESOLVED**, that the Sixth District go on record as approving the program for the evaluation of internship as requisite for examination and licensure, as adopted by the National Association of Boards of Pharmacy.

The Committee on Resolutions believe this resolution belongs in the hands of the N.A.B.P. and recommends that no action be taken. Carried.

DISTRICT NO. 8

19. **WHEREAS**, the growth of voluntary health insurance programs has attained such proportions in the United States; and **WHEREAS**, pharmacy has no representative on administrative boards of Blue Cross, Blue Shield and similar organizations; and

WHEREAS, the medication for those receiving medical aid under such plans could and should be supplied by the pharmacists of the member's own choosing; and

WHEREAS, the dispensing of medication in group insurance has too often been in the hands of non-pharmacist personnel; therefore,

BE IT RESOLVED, that District No. 8, N.A.B.P. and A.A.C.P. goes on record as opposing certain current practices of voluntary health insurance programs in supplying drugs and medication to participating members; and

BE IT FURTHER RESOLVED, that such organizations be requested to include pharmacists on their advisory boards,

BE IT FURTHER RESOLVED, that the dispensing of medicines to those entitled to medical aid be entrusted only to properly qualified pharmacists; and

BE IT FURTHER RESOLVED, that members receiving medical aid under volunteer health programs be permitted to obtain medication from the pharmacist of their own choosing.

The Committee on Resolutions approved the recommendation in principle and suggested that it be referred to the A.Ph.A. Carried.

FROM THE COMMITTEE ON CURRICULUM

20. **BE IT RESOLVED**, that this Association approve experimentation by member colleges in the development of elective plans of college-supervised experience, for which credit toward graduation may be given.

It is the sense of this recommendation that plans which require the continuous employment of the student by a selected preceptor for a period of time equal to one semester (or quarter) or longer, should only be instituted as a part of a curriculum longer than the present four-years-after-high-school curriculum.

The Committee on Resolutions feels that experimentation as proposed in this resolution can be carried out now if it is done in addition to the present four-year program currently in operation. If the five-year program proposal is approved, the committee believes that this experimentation should be in addition to the regular collegiate program of instruction. We feel that if it were included as a part of any educational program it would mean a dilution of educational standards.

The Committee on Resolutions recommend that this resolution be disapproved. Following considerable discussion a motion to table was approved.

COMMITTEE ON PROFESSIONAL RELATIONS

21. It is recommended that the Committee on Professional Relations be discontinued, unless it is needed for a specific task.

The Committee on Resolutions approved this recommendation and recommended its adoption. Carried.

RESOLUTIONS ON WORLD CONGRESS

22. WHEREAS, the American Pharmaceutical Association has abandoned its plan of a Pharmaceutical World Congress to be held upon the occasion of its centenary in 1952, in the frame of which the American Association of Colleges of Pharmacy was to arrange and direct a World Congress on Pharmaceutical Education; and

WHEREAS, by this decision of the American Pharmaceutical Association the Committee on World Congress for Pharmaceutical Education has lost its purpose;

BE IT RESOLVED, that the Committee be dissolved.

The Committee on Resolutions approved this resolution and recommended its adoption. Carried.

COMMITTEE ON TEACHERS CONFERENCES

Resolution from the Committee on Teachers Conferences referred from the Conference on Teachers of Pharmaceutical Economics:

23. **WHEREAS**, The Joint Teachers' Conference of the A.A.C.P. has used the term 'pharmacy administration' in the By-Laws produced for adoption at its annual meeting in 1951, and **WHEREAS**, the use of the term "pharmacy administration" in describing the area formerly known as pharmaceutical economics meets with the approval of the members of the Conference on Teachers of Pharmaceutical Economics to be known as the Section on Pharmacy Administration under the proposed By-Laws, therefore **BE IT RECOMMENDED**, to the American Council on Pharmaceutical Education that the term 'pharmacy administration' be used in the proposed accreditation manual when referring to that area of pharmacy formerly known as pharmaceutical economics or that area sometimes referred to as pharmaceutical administration.

The Committee on Teachers' Conference recommends adoption of this resolution, together with the recommendation that it be forwarded by the Secretary of our Association to the American Council on Pharmaceutical Education.

The Committee on Resolutions approved this resolution and recommended its adoption by the Association. Carried.

REPORT OF THE HISTORIAN

24. **RESOLVED**, that the American Association of Colleges of Pharmacy recommend for use by its constituent schools the Pharmacist's Oath, prepared by J. Hampton Hoch, and that the American Institute of the History of Pharmacy be requested to send a copy of the oath with this resolution to each of the member schools.

The Committee on Resolutions commended and endorsed this idea of sending copies to the member schools but felt that the Institute had the privilege of doing that without any request from us.

The Committee on Resolutions recommend that no action be taken on this resolution.

COMMITTEE ON PLANT SCIENCE SEMINAR

25. **BE IT RESOLVED** that the Plant Science Seminar offer to the Executive Committee of the A.A.C.P. its services and full cooperation in arranging for a seminar of teachers of pharmacognosy in 1952 or 1953.

The Committee on Resolutions recommended that this resolution be referred to the Executive Committee. Carried.

The following resolution was submitted to the Association by Professor L. B. Jeffries and Mr. Louis E. Kazin.

26. **WHEREAS**, Pharmacy has been given recognition as a member of the Civilian Defense health team; and
WHEREAS, the duties and functions outlined by the Federal Civil Defense Administration are presently so ambiguous as to require definition before the indoctrination training can be implemented; and,
WHEREAS, it has apparently been left to organized pharmacy to develop and define these functions; and,
WHEREAS, the responsibility for the development and implementation of such a program of education and indoctrination is appropriately that of the colleges of pharmacy and their extension services;
BE IT RESOLVED, that a committee be designated to study the means and methods by which said colleges of pharmacy may implement and meet said obligations as expediently as possible.

The Committee on Resolutions approved this resolution and recommended its adoption. Carried.

CHAIRMAN ROWE INTRODUCED THE FOLLOWING RESOLUTION:

27. **WHEREAS**, the American Pharmaceutical Association will celebrate the centennial of its founding in 1952; and,
WHEREAS, the promotion of pharmaceutical education has been one of the objectives of the A.Ph.A. since its inception; now, therefore,
BE IT RESOLVED, that a committee of five members be appointed to cooperate with the A.Ph.A. in the development of its centennial celebration and providing proper recognition of the influence of the A.Ph.A. on pharmaceutical education in connection with the program of our 1952 Convention.

The Committee on Resolutions approved this resolution and recommended its referral to the Executive Committee. Carried.

28. **BE IT RESOLVED**, that we express our appreciation and extend our thanks to Dr. Kenneth M. Endicott, Dr. Richard A. Deno, Dr. W. Paul Briggs and Dr. G. Lester Anderson who appeared on our program and contributed greatly to the success and interest of the meeting.

The Committee on Resolutions recommended the adoption of this resolution. Carried.

29. **RESOLVED**, that the American Association of Colleges of Pharmacy extend its thanks to the members of the Local Committee, the officers of the American Pharmaceutical Asso-

ciation, to the staff of the Hotel Statler, and to all others who have contributed to the arrangement and success of this 1951 meeting in Buffalo.

The Committee on Resolutions recommended the adoption of this resolution. Carried.

Chairman Rowe and Dean Foss moved the adoption of the Report of the Committee on Resolutions. Carried.

American Association of Colleges of Pharmacy Minutes of the Meetings of the Executive Committee

Held at the Hotel Statler, Buffalo, N. Y.
August 25, 26 and 28, 1951

1. Meeting called to order by Chairman Burt at 10 A. M. Present-President Hugo Schaefer, President-Elect, J. Allen Reese, Dean John McCloskey, Dean B. V. Christensen, Dean George E. Crossen, Dean Linwood F. Tice, Professor George L. Webster, Editor R. A. Lyman, and Secretary L. C. Zopf.
2. Communications received by the Secretary-Treasurer were read and discussed.
3. President Schaefer reviewed the major points of his report which were approved on motion by Christensen-Crossen.
4. The address of the President-Elect, J. Allen Reese was abstracted and the address approved for presentation.
5. Secretary Zopf presented an itemized financial report which was carefully considered and approved. A separate itemized report of the fund for the Seminar on Pharmacology and Related Subjects was also reviewed. A summary of the two accounts was presented and approved for publication in *The Journal*.
6. Chairman Burt abstracted the report of the Executive Committee which was discussed and approved.

7. The report of Editor Lyman was read and approved.
8. Chairman Burt presented the report of the meetings of the American Foundation for Pharmaceutical Education and the Board of Directors of the American Foundation for Pharmaceutical Education, May 17, 1951, which report was discussed and received.
9. Dean George E. Crossen reviewed the qualifications for membership for the following schools: University of Utah, College of Pharmacy, University of Wyoming, College of Pharmacy, Southwestern State College, School of Pharmacy and St. John's University, College of Pharmacy. On motion of Christensen-Webster the report was received and the names of the four schools approved for presentation to the members of the Association for election to membership in the Association—Carried.
10. Chairman Burt certified that the University of Oklahoma, College of Pharmacy has satisfied all of the requirements for reinstatement to membership in the Association. On motion of McCloskey-Crossen, the University of Oklahoma, College of Pharmacy was recommended to the Association for reinstatement to full membership in the Association. Carried.
11. The officers gave reports of the various District meetings of the A.A.C.P.-N.A.B.P. which they attended as representatives of this Association.
 - a. Districts Nos. 1 and 2—Hugo H. Schaefer
 - b. Districts Nos. 3, 4 and 5—Louis C. Zopf
 - c. Districts Nos. 6 and 7—Joseph B. Burt
12. The Executive Committee discussed Resolution No. 4 (1950) requiring a minimum of two years of enrollment for students with a foreign background in pharmaceutical education. Christensen-Tice moved: 'Resolved that Resolution No. 4 adopted at Atlantic City requiring students with a background in pharmaceutical education from a foreign country (except Canada) to complete not less than two years of regular enrollment in an accredited member college of pharmacy to be eligible for graduation; be reaffirmed as the continuing policy of the Association—Carried.

13. Chairman Burt introduced the topic of duplicate accreditation caused by the ruling of the Department of Education, Board of Regents of the University of New York which requires inspection and accreditation of all schools located outside of the State of New York by the latter organization.

Chairman Burt announced that he had invited Dr. Robert C. Killough, Jr., Assistant Commissioner for Professional Education for the State of New York, to meet with our Executive Committee Sunday morning at 10:00 and that invitations had been issued to members of the Council on Pharmaceutical Education, the American Pharmaceutical Association and the National Association of Boards of Pharmacy to participate in the meeting.

14. Following thorough consideration and discussion of Section 6b of Article I of the By-Laws, Chairman Burt appointed Christensen-Tice-Reese as a committee to formulate a resolution expressing the opinion of the Executive Committee.

Following dinner recess Tice presented the following resolution which was approved for presentation to the Association. **WHEREAS, a number of member colleges have been required by university or administration policy to adopt acceleration in the present emergency and whereas, it is the unanimous opinion of the Executive Committee that disciplinary action should not be taken against these members, and whereas, it has been proposed to repeal Section 6b of Article I of the By-Laws, and whereas, such action by the Association, however, is not to be considered as an endorsement of acceleration as sound educational policy, therefore,**

BE IT RESOLVED, that the Association reaffirms its opposition to acceleration and feels that every means possible should be used to discourage it.

15. On motion of Christensen-Webster the following proposal to repeal Section 6b of Article I of the By-Laws was approved for transmittal to the Association.

BE IT RESOLVED, that Article I, Section 6 of the By-Laws of the American Association of Colleges of Pharmacy be amended by the repeal and deletion of paragraph b, and changing the designation of paragraph c to b.

Schaefer-Tice moved that the Chairman of the Executive Committee be authorized to grant schools, so desiring, permission to accelerate their teaching program. Carried.

16. The Report of the Sub-Committee on Brochure on Pharmacy by Tice was received and discussed. The committee was authorized to seek professional guidance on format and layout and to investigate the possible cost for such assistance and publication. The Executive Committee favored the brochure as a completed Association enterprise. Carried.
17. Secretary Zopf reported on the roster of professional personnel and indicated the apparent opposition to the establishment of a placement bureau by the Association. On motion of Schaefer-Crossen the establishment of such a roster was temporarily abandoned. Carried.
18. Dean Crossen submitted a revised form of application for membership and it was moved by Schaefer-Christensen that the form be adopted and a sufficient number be mimeographed for use during the immediate years ahead. Carried.
19. Dean McCloskey made a progress report for the Sub-Committee on a proposed A.A.C.P. minimum salary scale for faculty members. The report was received and the Committee continued. Carried.
20. Schaefer-Crossen moved that approval be given to the continued participation of the officers of this Association in the District Meetings of the A.A.C.P.-N.A.B.P. Carried.
21. The request of the American Council on Pharmaceutical Education for payment of funds advanced by the College of Pharmacy, University of the Philippines (\$175.00) and College of Pharmacy, University of Puerto Rico (\$175.00) as inspection fees was presented by Secretary Zopf. On motion of Schaefer-Christensen the Secretary was instructed to pay the sum of \$175.00 to the Council for each of these schools if and when the Council indicates that the inspectors are to be made. Carried.
22. The Executive Committee heard the report of Chairman Burt concerning the enforcement of the two-year residence rule for a certain student with a foreign background in pharmaceutical education.

Christensen-Tice moved that the Chairman be directed to ask the school for a transcript of the work completed by this student during academic year 1951-52. Carried.

23. Professor Webster presented the report of the Sub-Committee on the Cost of Establishing the Office of a Permanent Secretary. The report was carefully considered and approved for transmission to the Association.
24. The Executive Committee discussed the subject for the 1952 Teachers Seminar and on motion of Zopf-Webster Pharmaceutical Chemistry was approved as the topic for the 1952 Teachers Seminar. Carried.
25. Dean Tice reported for the Committee on Credentials, stating that 62 member colleges were represented and that their credentials were received and properly certified.
26. Dean McCloskey reported that all member colleges had been mailed a copy of the report of the Sub-Committee on Summer School Courses offered by member colleges.
27. The Executive Committee approved the recommendation of Dean Christensen that surplus copies of the proceedings of the Pharmacy Administration (1950) Seminar be housed in the Secretary's office. Carried.
28. The incoming President was authorized to appoint a representative to serve on a five-member committee of the American Association for the Advancement of Science, to have charge of the program of the pharmacy section of the American Association for the Advancement of Science. The Committee is to consist of one each from the American Association of Colleges of Pharmacy, the American Association of Hospital Pharmacists, the American College of Apothecaries and two from the American Pharmaceutical Association. Notice of appointment is to be made to Dean Glenn L. Jenkins, Purdue University. Carried.
29. Dean Lyman raised the question with regard to rates for advertising in *The Journal*. Schaefer-Crossen moved that the question be referred to the Publication Committee for review with the power to fix the rates. Carried.
30. Christensen-Crossen moved that the members of the Executive Committee, other than the Chairman, Editor and Secretary-Treasurer, be reimbursed to the extent of \$25 to partially defray the expenses for attendance at the Executive Committee meetings scheduled for August 25 and 26. Carried.

31. Secretary Zopf reported the very laborious task which Professor Zada M. Cooper, former Secretary of the Association, continues to do in preparing the annual index for the Journal. On motion of Christensen-Crossen the Secretary-Treasurer was authorized to pay Professor Cooper \$25 for compiling the index for Volume XIV and \$25 for the index for Volume XV. Adjournment, 10:30 P.M.

**Sunday, 10 A.M., Hotel Statler
Buffalo, New York, August 26, 1951**

32. The Executive Committee through Chairman Burt, had arranged for a conference with Dr. Robert C. Killough, Jr., Assistant Commissioner for Professional Education, the State Department of Education, The University of New York, for discussion of the regulation by the Board of Regents of the University of New York requiring the inspection and accreditation of schools located outside the State of New York by the latter organization for the purpose of being placed on their accredited list of schools. Members of the American Council on Pharmaceutical Education, National Association of Boards of Pharmacy and the American Pharmaceutical Association officers were also invited. Dr. Killough and Mr. A. James Coe, Executive Assistant for Professional Education of the State of New York, outlined the regulations of the Board of Regents and indicated that this requirement had to be met by all professions recognized in the State of New York and that it was not a special requirement set up for pharmacy. Free discussion was permitted by all members present and the suggestion made by President Schaefer, that perhaps the Board of Regents of New York might review and approve the accrediting agencies, met with some favor. The meeting was adjourned at 12:00 noon.

**Tuesday, August 28, 1951—7:00 P.M.
Executive Committee
Hotel Statler, Buffalo, New York**

33. The Executive Committee was called to order at 7:00 P.M. Members present: President Reese, Editor Lyman, Dean Crossen, Professor Webster, Dean Tice, Dean Schaefer, and

Secretary Zopf. Guests: Vice-President Foss, Dean O'Brien and Dean H. G. Hewitt.

34. The following old business was discussed: Dean Tice mentioned the desirability of sending a representative as a commissioner or advisor on pharmaceutical education to Japan. He was requested to obtain further information as to the needs and desires of Japan and to present his report at the interim meeting.
35. The question of the possibility of offering the Bachelor of Pharmacy degree upon the completion of a five-year course was considered and action deferred until the interim meeting. Meeting adjourned 7:20 P.M.

**First Meeting of the Reorganized Executive Committee 1951-52
Hotel Statler, Buffalo, New York
7:20 P.M., August 28, 1951**

Chairman Burt called the meeting to order.

Present: Dean Hewitt, Dean O'Brien, Dean Tice, Dean Schaefer, Professor Webster, Editor Lyman and Secretary Zopf.

Guests: Vice-President Foss.

1. The Committee discussed the length of the seminar program and recommended that the Seminar Committee membership be composed, as in the past, of the President, the Chairman of the Executive Committee, the Secretary-Treasurer, and the Dean of the host school and two other members; that the seminar be of one week's duration, and that it be held between June 15 and July 15. Carried.
2. The budget for 1951-52, as presented by Chairman Burt, was reviewed. On motion of Schaefer-Webster the budget as submitted was approved. Carried.
3. Professor Webster reported on the Curriculum Study edited by Dr. Blauch and Professor Webster and indicated that the Survey Committee has made available up to \$3,000 for publication of this study. On motion of Schaefer-Hewitt the Executive Committee approved the use of Curriculum Committee reports as a part of the proposed volume and suggested that the

volume be referred to as a study of the pharmaceutical curriculum. Carried.

4. The date for the interim of the Executive Committee was tentatively set for Chicago—November 19 and 20, 1951.

Adjourned, 8 P.M.

**DR. HUGO H. SCHAEFER TO RECEIVE REMINGTON MEDAL
ON DECEMBER 11TH**

Dr. Hugo H. Schaefer will be presented with the Remington Medal, Pharmacy's highest award, at a dinner to be held in his honor on Tuesday evening, December 11th, 1951 in the Grand Ballroom, Waldorf-Astoria Hotel, New York City. An interesting sidelight to the award this year is the fact that it was Dr. Schaefer himself, in 1918, who suggested that an award be created in honor of Joseph P. Remington. Dr. James H. Kidder, dean of Fordham University College of Pharmacy, will serve as toastmaster.

The Remington Medal is presented by the New York Branch of the American Pharmaceutical Association to the individual who, during the past year or over a period of years, has made outstanding contributions to the advancement of Pharmacy. The past presidents of the American Pharmaceutical Association serve as the jury, deciding who shall be named as Remington Medalist.

The speakers for the evening include Dr. George Beal, associate director, Mellon Institute for Industrial Research; Dr. Ivor Griffith, president, Philadelphia College of Pharmacy & Science and Edward Neimeth, President of the National Magnesia Company.

Professor Frank J. Pokorny, Columbia University College of Pharmacy, is the dinner chairman. Irving Rubin, associate editor of *American Druggist* is the co-chairman. Tickets for the dinner—\$10 per person—may be obtained from Professor Pokorny by writing him at 115 West 68th Street, New York 23, New York.

The Editor's Page

The fifty-second annual meeting of the American Association of Colleges of Pharmacy is now history. It was a good meeting in every respect because it was characterized by a most vigorous debate which was devoid of personal animosity on the part of all who took part in the discussions.

The Editor has always maintained that a meeting which is characterized by smoothness accomplishes little. It takes men of strong and vigorous minds, who represent and present opposite points of view to make a good meeting.

The central theme of the Buffalo meeting was the proposal to increase the length of the pharmacy course by requiring one year of pre-pharmacy collegiate work beginning in 1956. There is one point that needs clarification. We should discontinue using the phrases, "five-year course" and "six-year course in pharmacy". What is contemplated is a minimal four year course with one or two college years of general basic training for entrance to the professional years. In other words the plan is to increase the entrance requirements for the study of pharmacy from a four year high school course by the addition of one or two years of academic training. It is as improper to speak of one or two years general collegiate training as a part of the professional course in pharmacy, as it would be to call the high school requirements (which were increased from one to four years back in the teens) a part of the professional pharmacy course. The whole effort through the first half of the century has been directed primarily, in all the professional fields, toward a better basic training as a preparation for professional studies. In this, pharmacy has lagged behind the other health professions. What this did to pharmacy, as a profession, was impressed upon us by the attitude of the Committee on Special Training of the War Department in the days of World War I when the question of establishing a Pharmacy Unit in the Student Army Training Corps was under discussion. If that is so far back that it has been forgotten, or unheard of by the masses, the events of World War II are sufficient to induce

us to do some serious thinking about what an inferior educational program does to a profession.

The most amazing thing brought out, by the discussion over increasing college entrance requirements, was the character of the arguments used against it by intelligent men. To the Editor this was most painful because these men are among that group he most admires and counts them among his most personal friends. But to say that to make a year of general college study a requirement for professional study is undemocratic, is beyond comprehension. By the same criterion, going from a one year to a two year high school requirement for the study of pharmacy in 1914, was undemocratic. Likewise, later making a three and then a four year high school course mandatory, was undemocratic. Later making a three year and then a four year college course must be branded as the ultimate in undemocratic procedures. If this is so, then we can be grateful to totalitarianism for progress in pharmaceutical education in the twentieth century. The Founding Fathers, escaping from tyranny, formulated one definition of democracy. The Russians, if we are to judge from their practices have quite a different one. Perhaps what we need is a new definition of democracy shaped to fit modern times and conditions.

The argument that requirements for the study of pharmacy should not be advanced at the present time because of the confusion and uncertainty throughout the world, likewise is beyond the understanding of the man on the street. It is because of these chaotic conditions that we need a definite forward looking program. What happens when there is no program is beautifully illustrated by the State Department's policy in the Far East. The Department had no program. It took a Douglas MacArthur to come home and jar the administration into following a definite policy. This is the opportune time for the Association to declare a definite program with objectives and dates of implementation set.

Some have suggested that increasing academic requirements will endanger graduate schools. Why, and in what way, is hard to understand. On the contrary, we believe it would bring greater support to graduate instruction in pharmacy. The writer has personally met, in two universities, opposition from graduate faculties toward graduate work by pharmacy students on the ground

that they were not as well prepared academically as students of medicine and dentistry. Bringing the general training of the students of pharmacy up to the level of these other professions would, in accordance with all modern trends in education, open greater opportunities for graduate study.

The fear has also been expressed, but not at this meeting, that it would be unwise or even useless to increase requirements since pharmacy is under attack and we should wait until we are sure of having a profession of pharmacy. The surest way *not to have* one is to make the educational program mark time. The surest way *to have* one is to expand the educational program to meet the professional, scientific and civic needs of modern life. If there had not been a need for the pharmacist, he would have disappeared from the stage long before our time. This special need for his services is becoming recognized more and more, as the years pass, by the other health professions, by such agencies as the United States Public Health Service, by all branches of the Armed Forces, by the pharmaceutical industry and by the general public. Opportunities exist in pharmacy that challenge the very best minds. But opportunities are also created and this requires a proper training, both academic and professional, that will enable the pharmacist to hold his own with the best in the other professions.

In all our thinking and discussions about extending the education of the pharmacy student, one individual has been overlooked and that individual is the pharmacy student himself. The pharmacy student himself wants to be given a better preparation for life, a better preparation for the practice of his profession and a better preparation for industry and research. He resents and is humiliated by being exposed to a program which is trailing at the tail end of the health education professional programs. Where is the young man, with any spirit, who would not be?

For the Association to approve unanimously, the principle of extending pre-professional training at San Francisco in 1949, and then to refuse to implement it in 1951, is the acme of inconsistency.

After having said what he has said, the Editor must add that to him, the Buffalo meetings were the most inspiring and the most comforting that he has experienced in many a day. The inspiration came from his having sat for a greater or lesser length of time in

each and every Teachers Conference. The earnestness and forcefulness with which these young men presented their papers and engaged in discussions, which had to do with the improvement of teaching methods, was most stimulating. The comfort came from the fact that not a single speaker, including those in the Conference for Graduate Instruction, was satisfied with the preliminary preparation the student had had for the pursuit of the special professional field in which each teacher was teaching. These deficiencies in preparation are not ones that can be corrected by "modernizing" the present four year curriculum. They require the extension of basic scientific training. This is the strongest argument for extending the time allowed for basic training, which has now become a fact in a number of institutions and in the future will become the standard of all.

Many years ago I made the statement that what pharmacy needed most was the funeral of a lot of deans. I included myself in that number. I admit that statement sounded somewhat brutal to come from a Presbyterian Elder. In my mellow years I think I would have said what pharmacy needs is the *retirement* of a lot of deans, and that is the group in which I now find myself.

In spite of all its inadequacies, in spite of all the criticism, in spite of all the obstructions, in spite of all the indifference, in spite of all the pessimism, both pharmaceutical education and practice are ramping toward the New Horizon.

One of the most commendable actions in the pharmaceutical area during the year, occurred at the fiftieth annual meeting of the Medical Library Association at Denver, Colorado, on June 28 to July 2, 1951. At the Pharmacy Group librarians' dinner certain recommendations were made which included a request to the president of the Medical Library Association that a committee be appointed to "study criteria and standards for pharmacy school libraries". President Marguerite Prince of the Association assured the group this would be done. While the Pharmacy Group Librarians spoke of the standards for pharmacy school libraries, set by the American Council on Pharmaceutical Education, as stimulating,

they consider them inadequate, particularly in regard to the qualifications of the librarians. The Pharmacy Group is certainly on the right track. The time has come when we have got to make some use of the library other than to let the student "browse" through the stacks. The pharmacy librarian must be trained to give an intelligent and specialized service to the pharmacy student and must be made an important member of the teaching staff. When that is done the library will become an indispensable part of the school's equipment, and not merely something for an accrediting committee to inspect.

Lack of space in this, the Proceedings number, makes it impossible to include a report on the Denver meeting but we intend to do so in the January 1951 issue. We shall give support in every way possible to the efforts of the Pharmacy Librarians to improve their standards and increase the usefulness of our libraries.

RUFUS A. LYMAN

The National Conference of Christians and Jews, Inc., has asked the American Association of College of Pharmacy, through the Editor, to place the Free University of Berlin, Germany, on the free subscription list to receive *The American Journal of Pharmaceutical Education*. This request will be granted.

Three of the four sectors of Berlin constitutes an island of democracy in the sea of totalitarianism. The Free University was established by the United States because the old Berlin University is in the Russian sector and is not free. Six thousand students attend the Free University, half of them from the Russian sector. These latter travel back and forth each day. Thus, they learn under freedom's banner and live under tyranny. The Free University needs a library. It will be built by a grant from the Ford Foundation. The Conference is collecting books and journals, textbooks, technical works, including professional, technical and trade journals. Money is also needed to be used in the purchase of new books. Checks should be made out to the National Conference, 381 Fourth Avenue, New York 16, N. Y.

Notes and News

Alabama Polytechnic Institute.—Dr. George M. Hocking resigned his position at the University of New Mexico in March in order to accept a temporary assignment as Technical Expert on Medicinal Plants for the Food and Agriculture Organization (ETAP) (FAD). In order to carry out his assignment, as Adviser to the Pakistan Government, Dr. Hocking traveled for three months in West Pakistan, then spent three months in study in various institutions of Europe (England, France, Switzerland, Italy). He was appointed as professor of pharmacognosy at the school of pharmacy of this institution and began service on September 10. He was recently appointed a member of the Comissao de Estudos de Plantas Brasileiras, Mediciniais E. Toxicas, Univ. de Sao Paulo, Brazil.

Butler University.—Ninety-three pharmacy students attended summer classes in the college of pharmacy or the college of liberal arts.—The bachelor's degree was conferred at the August commencement.—Mr. B. R. Mull, director of public relations for the Eli Lilly Company, has been appointed as lecturer in pharmacy administration. He will meet his classes five days a week.—Allen Beck, chief pharmacist at the Indiana University Medical Center Hospitals, and Luther Reck, chief pharmacist at the Indianapolis General Hospital, are in charge of student dispensary practice at their respective institutions.—Classes are now meeting in the new all Pharmacy building on the Butler campus.

Detroit Institute of Technology.—A new addition to the faculty is Miss Helen Reed, B.S. 1948. Following graduation Miss Reed served as a hospital and a prescription pharmacist in the states of California and Washington for two years. In 1951 she completed work for the master's at the University of Maryland. She is now in charge of dispensing pharmacy.—Dr. G. R. Ullrich, Philadelphia College of Pharmacy, 1941, in biological science and a Sc.D. degree from the same institution in 1951 has been appointed as assistant professor of pharmacognosy.—Dr. Kenneth H. Stahl has been named as professor of pharmaceutical chemistry. His work for the doctorate was at the University of Maryland.—Dean Esten P. Stout has retired after thirty years of service. His successor is Dr. Curtis H. Waldon, formerly dean of the College of Pharmacy of Montana State University.

Duquesne University.—Dr. Martin I. Blake, B.S. in Pharm. from Long Island University, M.S. from Rutgers, and Ph.D. from Ohio State, has been appointed assistant professor of pharmaceutical chemistry.—Mrs. Chester Manasterski, who did her undergraduate work in pharmacy

at the University of Toronto and at Wayne University, and received the master's degree from the University of Buffalo, has been appointed an instructor in pharmacy.—A new laboratory for dispensing practice was installed in Canevin Hall during the summer vacation. The recent expansion of the graduate program necessitated the installation of a second laboratory for graduate work in pharmacy and pharmaceutical chemistry.—Dr. F. I. Tsuji, of the department of biochemistry attended a course in radioisotope techniques at the Institute for Nuclear Studies at Oak Ridge, Tennessee, in June. The rest of the summer was spent carrying on research in biochemistry at Cornell University.—Dean Hugh C. Muldoon addressed the freshman class of the college of pharmacy of the University of Illinois in September as a part of the opening week orientation program.—During the summer, guests from many states and nine foreign countries visited the George A. Kelly, Sr., Memorial Pharmacy.

University of Florida.—The Bureau of Professional Relations has released a second edition of the Accepted Florida Formulary, which is now bound in loose leaf form for pocket size carriage.—New instructors on the staff are A. R. Haskell, M.S., from Kansas, and M. E. Hamner, M.S., from Colorado.—A refresher course for pharmacists sponsored by the college, was held at Jacksonville on June 25-26. It was held in conjunction with the annual post-graduate short course for doctors of medicine. On the faculty were Charles Hall Evans, Leroy A. Weidle, Jr., Dr. Gordon S. Bergy, Dr. L. G. Gramling, Dr. Chester S. Keefer, and Dr. Paul C. Olsen.—The curriculum has been revised, effective the present semester, and includes more cultural and professional courses. The student will now have to attend the equivalent of one summer session, in addition to the usual four academic years.—On June 11, Marion George Weber received the doctorate. His dissertation was on "A Phytochemical Study of *Tillandsia usneoides* Linne". He is now assistant professor of pharmaceutical chemistry at the University of Houston.—Merck & Co., has recently established a predoctoral grant-in-aid of \$1500 for research on thixotropic suspending substances. Louis D. King has been appointed as a graduate fellow under this grant.—William A. Ariail, James M. Crampton, Lamar B. Dale, Jr., Durward N. Enterkin, Seldon D. Feurt, Herbert M. Gross, Henry D. Johnson, Louis D. King, and Oliver M. Littlejohn were awarded the degree of Master of Science in Pharmacy at the June commencement.—The Hillsborough County Branch of the Ladies Auxiliary of the Florida State Pharmaceutical Association has presented a 16 mm. sound movie projector to the school.—H. J. Schaeffer has been appointed as a graduate fellow for work on poisonous plant substances under an Army contract.—The two Lilly Fellows are John A. Chambliss working on ergot and Joel J. Hertz, investigating riboflavin.

George Washington University.—Robert M. Leonard has been appointed assistant professor of pharmacology and pharmacognosy. He is

the son of Dean Emeritus Eugene O. and Mrs. Leonard of the Idaho State College. He is a graduate of that school and has completed the work for the doctorate at the University of Minnesota.—Forty new students enrolled for the fall term which brought the total enrollment to 130.—During the summer months Dr. S. J. Greco completed research on one of a series of studies concerned with the pharmaceutical uses of propylene glycol.

University of Georgia.—Prof. B. M. Gilbert has been granted a leave of absence for the fall quarter because of ill health. He will resume teaching duties around the first of the year.—Michael Steblar, who was valedictorian of the University in the 1951 graduating class, and George McClure, who obtained the highest scholastic average in the senior class, have been appointed teaching assistants and will pursue work toward the master's degree in pharmacy.—Profs. J. P. LaRocca and W. R. Byrum presented the results of their researches on Some Amids of Chloral and the Influence of Several Drugs upon the Acute Toxicity of Gold Sodium Thiasulfate.—The new animal room, including an air conditioning unit, has been completed.—On the afternoon of the first day of school, the student branch held a reception for new students, after which they were shown the facilities of the school of pharmacy.—Dr. Erdtman, professor of chemistry at Stockholm, Sweden, visiting the University of Georgia recently, spoke to the graduate students in pharmacy, forestry, and chemistry on the subject and urged the importance of cooperative research.—On October 16, Dr. Byrum addressed the Clarke County Nurses Association on "Cortisone and ACTH."

Howard College, Birmingham.—Seven recent graduates of Howard are chief pharmacists in the hospitals with which they are affiliated. All of them attended the recent meeting of the Southwestern Hospital Pharmacists Association held at Memphis, Tennessee on October 4-7.

University of Illinois College of Pharmacy.—One hundred and thirteen of the 338 students who applied for admission this fall, presented credit for college work. Eleven were holders of degrees.—As in recent years, only a capacity enrollment of 125 first year students were accepted. The selection was made from among 319 applicants who met the minimum qualifications permitting them to take the Pharmacy Background Tests. Applicants for first-year status were accepted only from residents of Illinois.—Dr. Dwight L. Deardorff, formerly a senior fellow at the Mellon Institute of Industrial Research and a lecturer at the University of Pittsburgh, and a member of the Illinois staff since 1949, has been promoted to a full professorship of manufacturing pharmacy.—Bids for the construction of the \$5,600,000 Dental-Medical-Pharmacy building are now being processed and construction is expected to begin in the near future.

University of Kansas.—Dr. J. H. Buckhalter discussed some of the recently introduced "Wonder Drugs" before the Lawrence Kiwanis Club on August 16.—Dean Reese is a member of a nine-man commission for the revising of the Kansas pharmacy laws.—Dr. Ray Hopponen is the secretary of a new section of the American Chemical Society for six east Kansas counties.—Dr. Li-Chin Chiang of Peking, China, who received the doctorate at the University of Minnesota, has been awarded a post-doctorate fellowship by Research Corporation, New York City. Her present studies are on "Synthetic Relatives of Cortisone". Working in the same field is another post-doctorate fellow, Dr. Paul Kurath, sponsored by the University of Kansas. Dr. Kurath received his doctoral training in the laboratory of Prof. L. Ruzicka, of the Swiss Federal Institute of Technology of Zurich.—A third postdoctorate, Dr. Robert F. Meyer, from the laboratory of Prof. Buchl in the Swiss Federal Institute of Technology, will continue his studies until January when he will join the research staff of Parke, Davis & Company.—A laboratory has been equipped for graduate students in pharmacology under Dr. D. G. Werizel. Four rooms have been provided: a workshop complete with tools, equipment for glass blowing and smoking and preserving kymograph records; a specially ventilated room designed to maintain uniform temperatures; a room for special equipment; and a laboratory for chemical work.—Dr. Burckhalter presented a paper entitled "A New Type of Amoebacidal Agent" at the International Congress of Pure and Applied Chemistry in New York City in September.—Dr. Franklin D. Murphy was installed as Chancellor of the University of Kansas on September 17.

Long Island University (Brooklyn College of Pharmacy).—Mr. Jack Sosnky, B.S. Columbia, M.A., New York University, has joined the department of chemistry. He formerly taught at the latter university.—Prof. Ralph A. Cheney spent the summer in research at the Marine Biological Laboratory at Woods Hole and presented a paper on the "Effect of Methylated Xanthines on the Fertilization Process" at the scientific meetings held there on August 28. Prof. Cheney was recently appointed the American collaborator for the new European journal *Acta Phytotherapeutics* which begins publication in 1952.

University of Maryland.—School opened with an attendance of 290, including 65 new and 25 graduate students.—Graduate students holding American Foundation for Pharmaceutical Education Fellowships are Andrew Bartilucci, Jacob S. Hanker, William Heller and John B. Ward.—Dr. Casimer T. Ichniowski has joined the staff as Emerson Professor of Pharmacology. Dr. Ichniowski did his undergraduate work in this school and received his graduate degrees from the University of Maryland. He has had wide experience in research and industrial institutions.—New assistants in the various departments are: Marion J. Chestkoff, Wilfred H. Gluckstern, Carl Kaiser, Elmer C. Koller and Dr. Ludmila Kregiel-Stass, all from the University of Maryland; Gordon H.

Bryan, from the State University of Montana; William H. Lawrence from the College of the Ozarks; Ernest C. Merkel, Jr., from the University of Maryland at College Park; and Bernard Misek from Columbia University.—Findlay A. Morrison who has completed work for the master's degree, has returned to his former position as assistant professor of pharmacy at the University of British Columbia and Herman M. Mupsek, a graduate student working for the doctorate, has accepted a position in the chemistry department of the same institution; Kenneth H. Stahl who has completed work for the doctorate is now asso-

Massachusetts College of Pharmacy.—The following promotions and appointments have been made recently: Heber W. Youngken, Sr., as research professor in pharmacognosy; Eldin V. Lynn, as research professor in chemistry and acting director of the research laboratory; Charles W. Bauer as chairman of the department of chemistry; Howard L. Reed as professor of biology and pharmacology, chairman of the department of biological sciences, and director of the division of pharmacology and allied sciences; and Maynard W. Quinby, as professor of botany and director of the division of pharmacognosy and allied sciences.—More than 275 attended the annual refresher course during four evenings in May.—At the June commencement, 106 were granted the bachelor's degree, 6 the master's, and one the doctorate.—Dr. Eldin V. Lynn has been elected an honorary member of the New England Association of Chemistry Teachers.—Ronald N. Duval is a teaching fellow for the current year in the department of chemistry.—MacAndrews and Forbes, importers, of Camden, New Jersey, have awarded a post-doctorate cooperative fellowship for the study of glycyrrhiza to William E. Hassan, Jr.—A course is now being offered in Elementary Statistics as an undergraduate elective. It is a prerequisite to the graduate course in Applied Statistics, given by Elmer B. Mode, chairman of the department of mathematics at Boston University.—Robert T. Marsh, formerly coach of the debating team at the Massachusetts Institute of Technology is giving a course in Public Speaking as an elective for undergraduates.

University of Minnesota.—The senior class made an educational trip through the wholesale house of McKesson & Robbins, Inc., Minneapolis Division, in June.—Myron R. Buchdahl was awarded the Ph.D. degree at the end of the first summer session.—Dr. W. J. Hadley served as field representative for the Minnesota State Pharmaceutical Association during the summer.—On June 18, Dr. C. V. Netz spoke before the Pharmaceutical Section of the Special Libraries Association which was meeting in St. Paul.—A new 120 gallon per hour de-mineralizer was installed during the summer.—Prof. R. Almen resigned in September as assistant professor of pharmacy and R. H. Miller was appointed to the position.—Graduate teaching assistants who received their appointments for the first time beginning this school year are, W. J. Roat, R. L. Bobbit, R. V. Peterson, B. Ecanow, and A. Heynaricks.—Captain W. C. Luers,

UPSA, (MSC), assistant professor of military science and tactics in charge of the Pharmacy ROTC, was recently promoted to the rank of Major.

Montana State University.—Dean Curtis H. Waldon has resigned to accept the deanship of the College of Pharmacy of the Detroit Institute of Technology. Dr. John F. Suchy has been appointed acting dean in his stead.—Dr. Suchy attended the Plant Science Seminar held at Niagara Falls in August.—The following members of the staff have taken a leave of absence for the current year for graduate work toward the doctorate: Prof. Tracy G. Call at the University of Minnesota; Prof. Gordon H. Bryan at the University of Maryland; and Prof. Francis C. Hammerness at the University of North Carolina.—Dean Charles E. F. Mollett spent the summer in Missoula engaged in writing a history of Various Phases of Pharmacy in Montana and in assembling a collection of pharmaceutical equipment and documents for the University Museum.

University of Nebraska.—A "New Student Week" was inaugurated in the college of pharmacy on September 10-15. During this week each student spent a number of hours with his adviser in individual and group conferences. Upper classmen served as student leaders to acquaint the student with campus facilities. It is hoped that the many things the student learned about university life and the close association developed between adviser and student during the week, will make his start in the university the best one possible.

University of New Mexico.—Following the convention in Buffalo, Dr. R. N. Castle attended the meeting of the American Chemical Society in New York City.—The New Mexico Pharmaceutical Association and Allied Drug Travelers honored Dean E. L. Cataline with a barbecue and stag party on September 7. The Dean was presented with a red sombrero autographed by everyone present and given a ride on a paint pony.—Dr. Louis Gerber, physician at the Student Health Service, is giving the lectures in pharmacology.—New equipment for the laboratories include a Rudolph polarimeter and a photomicrographic camera.—Blanche Morek and Duane Aldons were awarded the American Foundation Scholarships for the fall semester and Ben Flores, the Allied Drug Travelers' Scholarship.—Dean Cataline attended the recent meeting of the New Mexico Osteopathic Convention in Las Cruces.—Miss Frances Blair has given two lectures on the ingredients of cosmetics to the Home Economic classes, and is teaching a class in advanced first aid.—Jean DuBois, exchange student from the University of Paris is continuing his studies in pharmaceutical chemistry under Dr. Raymond Castle.

University of North Carolina.—Two hundred thirteen undergraduates and eleven graduate students are enrolled for the current year.—Twelve donors have made available 19 undergraduate scholarships averaging \$220 and totaling \$4,175 annually. The appointments are made

on the basis of need and maintained scholarship.—Yen-tsai Chang, the first Ph.D. recipient to major in the school of pharmacy, has returned to his home in China.—Doris B. Hawkins, recipient of the doctorate in August, has accepted an assistant professorship at the University of Arizona.—James G. Young, who has completed his dissertation for the doctorate, has accepted an assistant professorship at the Medical College of Virginia.—Dr. Walter Hartung attended the International Chemical Congress in New York in September.—Drs. Herman O. Thompson and Fred Semeniuk have been promoted to full professorship rank.—Prof. I. W. Rose, formally retired after 20 years of service, has consented to serve another year on a part-time basis.—New staff members and graduate students engaged include: William D. Cash as American Foundation for Pharmaceutical Education Fellow; F. C. Hammerness as graduate assistant; L. I. Henigberg as Sterling-Winthrop Fellow; Fred Teare as North Carolina Pharmaceutical Research Foundation Fellow and Mrs. Teare as instructor.—Dean and Mrs. Brecht have purchased a new home in Chapel Hill.

Philadelphia College of Pharmacy and Science.—The freshmen of the 131st entering class underwent a week of orientation which included a series of predictive tests. The graduate school is experiencing a peak enrollment.—Prof. John Novack, instructor in German, has been recalled into the Armed Forces and is now serving in the United States Intelligence Division.—German is now being taught by Theodore L. Lowe and Dr. William Schmidt has joined the department of pharmacology.—The college was honored recently with a testimonial scroll presented by the chamber of commerce of West Philadelphia.—Copy for the third supplement to the "Century Volume" of the college has gone to the printer. The book will depict the history of the college from 1941 to 1951.

Purdue University.—Prof. Donald W. Harding, who is in charge of Extension Activities and who is a 1st Lt. in Artillery has been called to active duty and reported to Fort Sheridan, Illinois on July 7 for processing.—The Seminar on Pharmacology held during the week beginning July 9, was attended by 193 registrants and participants. Sixty-five different colleges and 17 industrial firms were represented. Registrants came from 32 different states and the District of Columbia. Four came from Canada, 2 from the Philippines and 1 each from Egypt, India and Japan. The program included 40 participants in didactic instruction and 32 in demonstrations of technique and laboratory procedures.—Prof. Raphael O. Bachmann has resigned from the staff to accept a professorship in pharmaceutical chemistry at the University of Arkansas. He will be replaced on the Purdue staff by Instructor Dale W. Blackburn.—Donald C. Kroeger and Ruth Moote Kroeger, husband and wife, were awarded the doctor's degree at the August commencement, the former with a major in pharmacology and the latter a major in pharmacy. Dr. Kroeger has accepted an assist-

ant professorship of pharmacology at the University of Houston and Mrs. Kroeger has accepted an assistant professorship in pharmacy at the same institution.—Harold C. Bailey has completed the work for the doctorate and has gone to the South Dakota State College as assistant professor of pharmacy.—Fred G. Drommond has completed work for the doctorate and returned to the University of Colorado as assistant professor of pharmacy.—Myron W. McKinney and Edward V. Svedres have both completed the work for the doctorate in pharmaceutical chemistry. The former is now employed in the Pharmacy Design Division of Eli Lilly and Company and the latter is in the Research Division of Smith, Kline & French Laboratories, Inc., in Philadelphia.—The following students have completed the work for the master's degree: Earl F. Brahe, major in pharmacy, is now on the staff of Butler University; John B. Ward, major in hospital pharmacy, will continue graduate work for the doctorate at the University of Maryland; Wilson Nashed of Egypt, major in hospital pharmacy and James A. Campbell, major in pharmaceutical chemistry, will continue graduate work for the doctorate at Purdue.

South Dakota State College.—One hundred twenty students have registered for the fall term.—Edgar E. Parry, instructor in pharmacognosy and Donald P. Abler, instructor in pharmacology have resigned from the staff, the former to enter retail pharmacy in Minnesota and the latter, in California.—Dr. Harold S. Bailey has joined the faculty as assistant professor of pharmacy and will teach pharmacology and clinical methods. Dr. Bailey has both the bachelor's and Master's degrees from the Massachusetts College of Pharmacy and the doctorate from Purdue where he also served as an instructor. During World War II he served as a chief pharmacist. He is married and has two children.—Dr. Kenneth Redman has been appointed professor of pharmacognosy. Dr. Redman had his undergraduate work at the University of Washington and holds the doctorate from the University of Wisconsin. He has had teaching experience at the North Dakota State College, University of Toledo, University of Georgia, University of Mississippi, and the College of the Ozarks, where he was dean. He has had four years of drugstore experience, is registered in four states and holds membership in numerous professional and honorary societies and has been a frequent contributor to scientific and professional journals. He is married and has two sons.

Southern College of Pharmacy, Inc.—New members of the faculty are: Mr. Ernest J. Jacob, Ph.G., B.S., Loyola University, New Orleans and M.S. Louisiana State University, has taught for a number of years at Xavier University, has had several years experience in retail pharmacy and as a professional representative for Bristol Laboratories in New Orleans; Mr. Woodson C. Birchfield, B.S., is visiting lecturer in pharmacy orientation and drug store management; and Mr. Wei Chin Liu, a graduate of the National Tsing-Hua University, has the master's

degree from the University of Maryland and will receive the doctorate from that University in January 1952. For ten years after graduation Mr. Liu taught in the departments of organic and physical chemistry in his alma mater and since 1948 has studied at the University of Maryland, first under a Winthrop-Sterling Fellowship and later under a Bristol Laboratories Research Fellowship.—Two ultra-modern pharmacy laboratories have been completed recently and are equipped with the latest in lighting, furniture, and special laboratory material.

Temple University.—Dr. Fritz O. Laquer, distinguished for his researches in biology and biochemistry, has been promoted to associate professor of biochemistry. He first joined Temple faculty in 1940 as a research professor. He will devote the major portion of his time to graduate research programs and will increase his teaching load. Dr. Laquer is a graduate of the University of Heidelberg and has taught in a number of European universities. Just before coming to Temple he served as consultant to the health department of the Venezuelan government. He is the author of three text books and has published over one hundred articles in his principle fields of research.—The retirement of Dr. George D. Hadzsits as professor of pharmaceutical Latin has been announced. Dr. Hadzsits was formerly professor of Latin at the University of Pennsylvania, retiring in 1943. He then served as visiting professor at Indiana and Johns Hopkins Universities before joining Temple in 1946.—Dr. Alfred N. Martin has been appointed a member of the Sub-committee on External Preparations of the Committee on the National Formulary.—Dr. David E. Mann, Jr., assistant professor of physiology and pharmacology served on the staff of the department of physiology of Purdue University during the summer term.—Mr. John A. Lynch has been appointed chairman of the First Aid and Pharmacy Week committees of the Pennsylvania Pharmaceutical Association.—Dr. Munch has been named the official delegate of the school to the second Pan-American Congress in Lima Peru in December.—Dean J. B. Sprowls has been elected vice-president of the Philadelphia Branch of the A.Ph.A.

University of Tennessee.—The school has purchased a tape recorder to be used experimentally as an instructional aid and to record the proceedings of various meetings.—Dr. Albert Music visited the colleges of pharmacy in Colorado, Utah, Southern California, Arizona and Houston, Texas, during June and July.—The department of pharmacognosy has acquired a number of research type binocular stereoscopic microscopes for the use of students in the study of crude drugs.—The Fall Quarter opened with a total of 70 new students, ten of whom are women.—The new Cancer Research Building and new Institute of Pathology were dedicated on October 4.—The Phi Delta Chi fraternity has acquired a house.—Mr. Howard Hassler, instructor in pharmacy, was elected president of the Memphis Branch of the American Society of Hospital Pharmacists, which was organized on August 17.

University of Texas.—Dr. S. G. Mittelstaedt has resigned in order to accept an assistant deanship at the University of Arkansas. His place is being filled temporarily by Jordan Kaufman, B.S. in Pharm., University of Connecticut. Other new instructors are Don Burkett, I. K. Meyer and Henry Wertheimer, all graduates of the University of Texas.—Dr. John Emerson Davis has been appointed head of the division of pharmacology. Dr. Daniel P. N. Tsao, University of Washington, has been appointed to replace Dr. M. A. Chambers during the latter's absence on leave to continue advanced study in the Biological Division at Oak Ridge, Tennessee.—Wallace Guess completed work for the master's in the summer session and is continuing his studies for the doctorate at the University of Washington under a Foundation fellowship.—Prof. R. G. Brown has been granted a year's leave of absence to study for the doctorate in the field of pharmacology at the medical branch of the University of Galveston.—Twenty-four seniors were graduated at the close of the summer session in August.—Four hundred and eleven students are registered for the fall semester.—Prof. W. R. Neville, having reached retirement age, is serving during the current year on a part time basis. He will continue to teach a course in prescription compounding.—It is anticipated that the new pharmacy building will be ready for occupancy early in 1952 and plans are being made for dedication services early in the spring semester.

University of Utah.—One hundred eighty-five students registered for the fall quarter. There was a considerable drop in GI students and an increase in women.—Douglas Lee Smith, a former graduate in pharmacy, has returned for graduate work in pharmacology.—In cooperation with the Utah State Civil Defense efforts, the members of the student branch assembled a thousand first aid kits to be made available to the public through the drug stores of the state.—On September 29, the wives of the faculty members assisted the Womans Auxiliary of the Utah Pharmaceutical Association at their annual benefit tea. The proceeds went to a fund maintained by the Auxiliary as a scholarship for worthy pharmacy students.—Dr. Ewart A. Swinyard attended the fall meeting of the American Society for Pharmacology and Experimental Therapeutics held in Omaha, October 15-17. He presented a paper, written in collaboration with Drs. Eugene L. Bliss and Louis S. Goodman, entitled "Anticonvulsant Properties of Two New Spirocyclopentane Barbituric Acids".—Dean L. David Hiner represented the South Dakota State College at the inauguration of Dr. Ernest L. Wilkinson as president of the Brigham Young University at Provo, Utah, on October 8. Mr. Jack Heinz, an apothecary of Salt Lake City, represented the American Pharmaceutical Association at the ceremonies.

Medical College of Virginia.—The Virginia Pharmaceutical Association meeting, which was held in Virginia Beach, was attended by several members of the pharmacy staff. Mr. Frank Pitts, who recently attended a three-weeks course in radiological defense at the Army

Chemical Center in Maryland, gave a talk at the convention on "Some Aspects of Nuclear Energy".—James G. Young, who has been working toward the doctorate in pharmaceutical chemistry at the University of North Carolina, has joined the staff of the department of pharmaceutical chemistry.—Dr. Warren Weaver attended the American Chemical Society convention in New York in September.—Dean R. Blackwell Smith presented a paper in September before the Twelfth International Congress of Pure and Applied Chemistry held in New York City.

Wayne University.—During the summer, Dr. Harold E. Bailey attended the University of Michigan Biological Station for the purpose of classifying fungi.—Dr. Melvin F. W. Dunker has revised his chapter on Colloids and Emulsions in the American Pharmacy Series, and Profs. Ernest R. Crandall and Ralph J. Hill have revised their laboratory guides in their respective fields.—Dr. Frederick A. Waterman has completed a direct coupled pre-amplifier for ocllographic studies of the effects of certain drugs on transmission of the nerve impulse. He has also designed and completed the construction of an apparatus for studying the effects of various chemical compounds on the isolated mammalian heart.—The library has received fifty bound volumes of periodicals from Parke, Davis & Company. It now has a complete set of the *American Druggist* including some of the earlier issues when it was known as *New Remedies*.—W. A. Sibley, a graduate student in pharmaceutical biological science, has accepted an assistant professorship at Texas Southern University.

University of Wisconsin.—Dr. Louis W. Busse received the Ebert Medal at the American Pharmaceutical Association convention for distinguished research in physical pharmacy as applied to powders. His collaborator, Dr. Takeru Higuchi, received the certificate of honorable mention.—All of the pharmacy faculty but one attended the A.A.C.P.-A.Ph.A. meetings in Buffalo.—At the Historical Section meeting, Dr. George Urdang was presented with a gavel made from material that had served the Army Medical Museum since its founding. The presentation was made by Morris Leikind, chief of the Historical Division of the Museum.—The School of Pharmacy has been awarded a contract on a pharmaceutical research problem by the U. S. Army Chemical Corps. Dr. Louis W. Busse is project supervisor; Dr. Dale E. Wurster is in immediate charge of research, assisted by Leslie M. Lueck.—William S. Apple becomes Coordinator of Extension Services in Pharmacy, beginning with the fall semester. He will also give instruction in pharmacy administration.—Dr. John E. Steinhaus succeeds Dr. Ray E. Green as associate professor of pharmacology, in a joint appointment with the medical school.—A new series of publications titled "Contributions from the History of Pharmacy Department of the School of Pharmacy, University of Wisconsin" has been launched by the American Institute of the History of Pharmacy. The booklets will present the results of scholarly research by students.—Roger Fitzgerald,

Wisconsin senior, was the A.Ph.A. student delegate from District 4 at the Buffalo convention.

University of Wyoming.—At the request of the main office of the Canadian Foundation for the Advancement of Pharmacy located at Toronto, Ontario, Dean David W. O'Day furnished the Foundation a recent radio script on "Opportunities in Pharmacy" which was used for radio broadcasting throughout the state of Wyoming in a special vocational series developed at the University.—Following the national pharmacy meetings in Buffalo, Dean O'Day attended the national convention of the American Chemical Society in New York City.—A completely equipped Warburg Apparatus has been added to the pharmacy equipment.—Dr. John F. Reed, associate professor of botany has been granted a year's leave of absence to participate in a soil analysis and classification project in the Belgian Congo.—Dr. Theodore O. King, associate professor of pharmacology, spent the summer in Europe. The first two months he conducted research on the "Chemotherapy of Tuberculosis" under a World Health Organization Fellowship at Guy's Hospital and the medical school's department of pharmacology in London. His special problem was a study of the intra-cranial method of evaluating drugs for use in tuberculosis. August was devoted to travel in France, Switzerland, Italy, and Austria.—Three students received the bachelor's degree in pharmacy at the August commencement.—Gerald Lanchantin was awarded the master's degree with a major in chemistry and a minor in pharmacology. He expects to study for the doctorate at a Pacific coast university.—Prof. Jack N. Borie has returned to his teaching duties after a year's graduate study toward the doctorate in pharmacy at the University of Washington.—Miss Ramona Parkinson took special courses at the University of Colorado during the summer session.—The newly developed curriculum of the Nursing School includes certain courses in pharmacy which are intended to give the students a fundamental knowledge concerning dosage and action of drugs and medicine.—Dr. Sarah J. Rhoads and Miss Rebecca Rawlins, both of the chemistry department, attended the meeting of the American Chemical Society in New York in September.

The Committee on Pesticides of the Council on Pharmacy and Chemistry of the American Medical Association, announces the publication of a second series of committee reports in the Association's journal on the medical aspects of insecticides. The reports have been reprinted under the title "Pharmacologic and Toxicologic Aspects of DDT (chlorophenothane U.S.P.)". The reprint is accompanied by a second reprint on "Insecticide Storage in Adipose Tissue". Because of the extensive use of the newer insecticides these reprints contain valuable information for both teacher and pharmacist are available at the Secretary's office, 535 N. Dearborn Street, Chicago, Illinois.

Miscellaneous Items of Interest

A MEMORIAL CURT P. WIMMER

The death of Dr. Curt P. Wimmer occurred the night of September 9 at the Horace Harding Hospital, Queens.

Curt P. Wimmer was born on July 2, 1879, in Salzungen, Germany, the son of Theodore and Meta Wimmer. He remained in that country until 1895, when he came to the United States and settled in New York. In 1902, after successfully completing his course of study at the New York College of Pharmacy he received a Ph.G. and started on his pharmaceutical career.

In 1904, Dr. Wimmer received the degree of Doctor of Pharmacy from the Columbia College of Pharmacy and was given a special faculty award for his accomplishments as a graduate student in his chosen field. Two years later, he became an instructor in pharmacy at the Columbia College of Pharmacy.

During the period between 1906 and 1946, the year he retired as Professor Emeritus of Pharmacy, Dr. Wimmer added achievement after achievement to his ever-lengthening list of accomplishments. In 1909, he obtained the degree of Master of Arts for special studies in the College of Physicians and Surgeons and the School of Mines at Columbia University. In 1911, he was appointed Assistant Professor of Pharmacy at his alma mater, in 1915 Associate Professor. In 1928, he became Professor and Associate Dean.

In 1925, he was invited by the Connecticut Pharmaceutical Association to organize and establish the Connecticut College of Pharmacy, an achievement that earned him the honorary degree of Master of Science from the University of Connecticut, of which the Connecticut College of Pharmacy is now a part, and an honorary membership in the Connecticut Pharmaceutical Association.

When Dr. Wimmer retired in 1946, he refused to relax his efforts on behalf of his profession. Continuing in his position as editor of the *New York State Pharmacist*, to which he had been appointed in 1943, he plunged into one project after another in his campaign to improve the lot of his fellow pharmacists and widen both the reputation and usefulness of the pharmaceutical calling. He redoubled his activity on behalf of the New York Academy of Pharmacy and the German Apothecaries Society, of both of which organizations he was president at the time of his death. He retained his great and abiding interest in the American Pharmaceutical Association.

At the time he passed away, Curt Wimmer held life memberships in the New York State Pharmaceutical Association, the American Pharmaceutical Association, the Alumni Association of the New York College of Pharmacy, and Phi Lambda Epsilon, the national honorary fraternity.

He was an honorary member of the New Jersey State Pharmaceutical Association, the New York Retail Druggists Association, the Queens County Pharmaceutical Association, and the Kappa Psi, Phi Delta Chi, and Delta Sigma Theta fraternities.

As an indication of his national prominence in the profession of pharmacy, Dr. Wimmer was elected honorary president of the American Pharmaceutical Association at its recent annual convention in Buffalo—an encomium that comes to few men in their lifetimes.

In addition to these and other honors, Curt Wimmer was also an honorary president of the New York State Pharmaceutical Association, a position that manifested the love the members of the organization had for the man's personal qualities as well as their respect for his professional accomplishments.

Among the many positions he held outside the field of pharmacy were those of mayor, police justice, health and sanitation commissioner, and trustee of the village of Ocean Beach, Long Island, where he had a summer home for 45 years.

During his tenure at the Columbia College of Pharmacy, Curt Wimmer was, in addition to a distinguished teacher, secretary of the faculty and chairman of student activities. For nine years, he was a member of the Columbia University Council, highest policy-making body among the University's faculty.

Dr. Wimmer is survived by his wife, the former Catherine Jacobsen, of Forest Hills, New York; one daughter, Mrs. Dorothy Madigan, of Garden City, Long Island; one son, Llewellyn Wimmer, of Huntington, Long Island; a sister, Mrs. Greta Herfeldt, of Munich, Germany, and four grandchildren.

In the death of Dr. Wimmer, pharmacy loses one of its finest leaders.

David Beiles

LOAN FUND ESTABLISHED BY THE LATE DR. WORTLEY F. RUDD

In 1904 a little man from Skinquarter in Chesterfield County was added to the faculty of the Medical College of Virginia. His appointment attracted slight attention, and it is highly improbable anyone realized this diminutive figure, later to become Dean of the School of Pharmacy, would do more than any other individual to shape the history of pharmacy in Virginia.

Forty-seven years later the generosity of the late Dean Wortley F. Rudd to his students continues through the establishment in his will

of a substantial pharmacy student loan fund for the Medical College of Virginia which has been announced by the executive committee of the Board of Visitors. This bequest is completely in keeping with the beliefs of the man who worked untiringly to aid struggling students whatever their problems might be.

He was eager to lend a sympathetic ear from the problems of the smallest drugstore in Virginia to the most involved questions of pharmaceutical education at Columbia University. As he received new honors and titles he remained as approachable as ever. When the University of Maryland presented him with an honorary Doctor's degree in 1941 for his work in the advancement of pharmaceutical education, he kept the name "Mr. Rudd" on his office door, the name by which he was affectionately known until his death on July 26, 1950. Mr. Rudd's career was marked with outstanding offices and tributes. He was made professor of chemistry at the Medical College of Virginia in 1910 then teaching practically all the chemistry courses given in the Schools of Medicine, Dentistry, Pharmacy, and Nursing. In 1920 he was appointed Dean of the School of Pharmacy, and for twenty-seven years he served in that capacity taking on new responsibilities in pharmacy and other fields. He served on the governing boards of the Richmond Professional Institute and the Virginia State Chamber of Commerce, and was president of the American Association of Colleges of Pharmacy. The *Richmond Times-Dispatch* cited him as the scientist making the greatest contribution to Virginia for the year 1943. In 1948 he received the Charles Holmes Herty Medal, an award made annually by the Georgia section of the American Chemical Society to a Southern chemist who is regarded as having made the most distinguished contribution to chemistry in the Southeast. The Virginia section of the American Chemical Society, the Virginia Academy of Science, and the Southern Association of Science and Industry all were largely treated through his efforts, and they rightly gave him the highest honors at their command. Through the activities of the Southern Association of Science and Industry, he worked with untiring zeal to develop the young men of the South using his influence to keep them here for the South's development and future.

In November, 1947, former students, associates, and friends from all walks of life gathered to see the presentation of his portrait to the Medical College of Virginia. On this occasion Dr. John Bell Williams, director of St. Luke's Hospital, Richmond, after enumerating Mr. Rudd's many honors ended his remarks by saying, "A week never passes that he does not yearn for some excuse to run out to Chesterfield to see his friends. Whether it be for a wedding, christening, all day church meeting, land sale, political rally, or a good old-fashioned Virginia funeral, he is sure to be present and to enjoy the richness of a visit with his oldest friends—for Mr. Rudd never loses a friend since he is a matchless friend himself".

**MINUTES OF THE ANNUAL MEETING (1951) OF THE AMERICAN
INSTITUTE OF THE HISTORY OF PHARMACY
(An Abstract)**

The 1951 meeting was held at the University of Wisconsin on May 9, the day before the presentation of the 10th anniversary program.

Reports of President Arthur H. Uhl, Secretary Glenn Sonnedecker, Director George Urdang and Treasurer Sylvester H. Dretzka were presented and discussed.

President Uhl again mentioned the three pillars upon which the future of every institution rests: sound goals, adequate work, and financial backing. The caliber of the scholar the Institute has had as Director, guaranteed the first two mentioned pillars. It was largely the devotion and the abilities of George Urdang that has brought the Institute through its formative years to its present stage of development, and recognition, not only within the American pharmaceutical world but within the scholarly world at large. The third pillar, namely, financial support, needs stabilization. With this in mind Dr. Urdang and Dr. Louis W. Busse, early in the year, visited with a number of leaders in industry. The response from these men was encouraging, and out of the contacts came a suggestion that a Sponsoring Committee be formed which would maintain more consistent contacts with prospective sponsors and which would testify to the worthiness of the Institute's program. An effort should also be made to interest larger number of American pharmacists to become members, not only to increase the support and stability of the Institute, but to extend its influence and distribution of its publications.

Secretary Sonnedecker, in his report, called attention to the fact that ten years ago the Institute was only an idea. Today, largely through the efforts of George Urdang, it is a recognized institution with national and international responsibilities. As an American institution its first task is to develop and sponsor research and publication in the Americas, to join hands with whatever organizations, in other countries, share our goals, and to serve as a coordinating agency in the Western Hemisphere. This function was expressed in a suggestion of the First Pan-American Congress of Pharmacy that the American Institute of the History of Pharmacy sponsor and edit a series of publications devoted to the history of pharmacy in each country of the Americas. The first such booklet in the Latin-American series, now coming off the press in Spanish and English editions, tells the story of Puerto Rican pharmacy. The University of Puerto Rico has given this project its generous support under the authorship of Dean Luis Torres-Diaz. Another manuscript is in preparation on the history of pharmacy in Argentina. To help the Institute develop such a series and to encourage other scholarly work in the history of pharmacy and interest in the general program of the Institute, seven representatives of the Institute have been appointed during the year in Latin-America

and in the Philippines. These distinguished men have received special certificates attesting to their appointment: Dr. Francisco Cignaoli of Argentina, Dean Luis Torres-Díaz of Puerto Rico, Dr. Alvaro Albuquerque of Brazil, Sr. Vincente Castro García of Mexico, Dr. Angel Maldonado of Peru, Dr. Hector Zayas-Bazan y Perdomo of Cuba, and Dean Patrocinio Valenzuela of the Philippines. Appointments in other countries will be made later for help in carrying forward the history of pharmacy as contributory to the profession and to the world of historical scholarship at large. It was also suggested that the idea of regional representatives might well be extended to the individual states of our own country. It would give the Institute a more effective functioning structure within the United States and promote more active work in the history of pharmacy which each state has as its own.

The Secretary made appreciative acknowledgment of special financial grants made during the year by Burroughs-Wellcome and Co., H. A. B. Dunning, Fritsche Bros., Parke-Davis and Co., and the Schering Corp. and a number of members who gave generously beyond their dues.

The report of the Director was most amazing and the volume of work accomplished during the year and the significance of that work can be grasped and appreciated only by the reading the entire report. It has been published in mimeograph form and can be obtained by addressing Secretary Glenn Sonnedecker at the University of Wisconsin. In brief, the report covers those activities in the homeland where the Director's participation was sought and agreed upon. They included the Atlantic City meeting of the American Pharmaceutical Association; the dedication of the United States Pharmacopoeial Convention Headquarters in New York City; the United States Pharmacopoeial Convention in Washington; the dedication of a Pharmacy Museum in New Orleans; a European trip including attendance, as a representative of the American Institute of the History of Pharmacy, at the Sixth International Congress for the History of Science at Amsterdam, where he was asked by the Congress Committee to assist in establishing a section on the History of Pharmacy within the framework of the International Congress for the History of Science; attendance at the Congress on Social History of Medicine in Pura, Switzerland, where his topic was "Pharmacy's Part in Society"; and visits to Geneva, Zurich, Basel, Germany, Paris, and England where he consulted distinguished colleagues on problems connected with their historical fields.

The report also lists the publications which the Institute has distributed to its members during the year and most appropriately concludes with a record of the distinctions which, in recognition of the work of the Institute, have been bestowed upon its Director in the first decade of its existence. Scarcely a year has passed in the 1941 to 1951 period that has not seen one or more rewards for distinguished service bestowed upon him. The list contains 23 specific honors.

In the closing moments of the meeting the following action was taken:

1. The officers and members of the Council were reelected for the coming year.
2. The officers of the Institute were instructed to review the adequacy of the Constitution and consider the desirability of By-Laws, in view of the larger scope of activity planned for the Institute, and to offer recommendations at the 1952 meeting.
3. Approved the establishment of a Sponsoring Committee to help assure the means for increasing the facilities and services of the Institute, and expressed appreciation to Dr. George D. Beal for his sympathetic support and his willingness to accept the chairmanship of said Committee.
4. Adopted unanimously the following resolution:

Resolved, that the American Institute of the History of Pharmacy sponsor a George Urdang Medal, to be established on the Director's 70th birthday (June 13, 1952) and to be awarded periodically for outstanding contributions in the field to which he has dedicated his life.

Dr. Urdang will retire from the University faculty on the 70th anniversary of his birth. The proposal to establish a medal in his honor originated with the Wisconsin faculty and officers of the Institute. Possibilities were discussed of providing remuneration through the Institute to permit continuance of his work as Director.

A committee was named to administer the establishment of the award, the personnel of which is; Dean Arthur H. Uhl, representing the University of Wisconsin School of Pharmacy; Prof. Erwin H. Ackerknecht, representing professional colleagues of Dr. Urdang; Glenn Sonnedecker, representing the American Institute of the History of Pharmacy; Jennings Murphy, representing the Wisconsin Pharmaceutical Association; and Sylvester H. Dretzka, representing the Wisconsin State Board of Pharmacy.

5. A motion of appreciation of and by the members to Dr. George Urdang for his past ten years of selfless service and brilliant directorship on behalf of the Institute.

The abstractor ends this abstract of the minutes of the 1951 meeting of the Institute with the Director's statement that has become traditional in concluding his annual reports: "The aim of the American Institute of the History of Pharmacy is to equip the pharmacist for citizenship in the world of intellectual and moral responsibility by making him familiar with the non-technical aspects and humanistic ramifications of the profession and to do pharmacy's share in the co-operative endeavor for making the historical record of world civilization as complete as possible."

These objectives cannot be repeated too often. In them lies the secret of the strength of pharmacy and the guarantee of its future existence as an enduring and indispensable profession.

—Rufus A. Lyman, Abstractor

REPORT OF THE TEACHERS SEMINAR ON PHARMACOLOGY AND RELATED SUBJECTS

The Teachers Seminar on Pharmacology and Related Subjects was held at Purdue University throughout the week of July 9-14 inclusive, 1951. The Seminar was held under the auspices of the American Association of Colleges of Pharmacy and was made possible by a grant of funds from the American Foundation for Pharmaceutical Education. Forty-two individuals participated in the didactic instruction which included thirty-six lectures and two panel discussions. Fifty-one individuals participated in presenting forty-three laboratory demonstrations designed to show the proper use of equipment and the most suitable technique for instruction at the undergraduate and graduate levels as well as in research. Four equipment manufacturers displayed their apparatus and supplies pertinent to pharmacological work. The School of Pharmacy arranged a display of books and laboratory manuals, and compilations of library reference books and laboratory experiments were made available to all registrants. The Seminar was attended by 215 individuals of whom 193 were registrants and participants in the program. They came from sixty-five different colleges and universities and seventeen industrial companies. Thirty-two states and the District of Columbia were represented. Among the colleges and universities represented were four from Canada, two from the Philippine Islands, and one each from Egypt, India and Japan.

It is impossible to convey in a report the fine spirit that prevailed throughout the seminar. Those who were in attendance have commended the careful preparation and able presentation by members of the faculty, the well planned and expertly performed demonstrations, and the details of planning and execution of tasks. Favorable comment also has been received concerning the careful selection of subject matter, the graded order of presentation, the prompt and regular attendance at meetings, and the general superior esprit de corps that prevailed.

It is believed that the Seminar was highly successful and that the program carried will accomplish the objective to upgrade the quality of instruction in the area of pharmacology and related subjects in our pharmacy schools. This upgrading as it gains momentum in the years ahead will bring improved teaching to successive generations of students. In time a greater profession giving increased service to the people will result.

Our Association owes special thanks to the American Foundation for Pharmaceutical Education for the vision and understanding of its leaders that led them to provide the funds that made the seminar possible. As the results are expressed through tangible improvements it is hoped that the donors to the Foundation may become fully aware of the excellent purposes and worthwhile uses their contributions serve.

— Glenn L. Jenkins, Chairman of the Seminar Committee.

The American Foundation for Pharmaceutical Education, under date of September 26, announced that the Executive Committee had approved the awarding of two new special graduate Fellowships in February 1952 for the study of Pharmacy (Business) Administration. Applicants must hold a B.S. in Pharm. degree, be accepted by a recognized graduate school of business administration and otherwise meet the high standards for Fellows set by the Foundation's Board of Grants. Applications should be made to the Secretary of the Foundation by December 15, 1951.

Four new Fellowships were approved in addition to the twenty-five previously awarded. The new Fellows are Tracy G. Call in pharmacognosy at the University of Minnesota; Eugene Parrott in pharmacy at the University of Wisconsin; Michael Clay in pharmacology at Ohio State; and Clinton B. Nash, also in pharmacology, at the University of Tennessee. The Executive Committee expects to issue a complete roster of all Foundation Fellows and Scholars about November 1.

The Executive Committee also announced activation of the Edwin Leigh Newcomb Memorial Awards. Three cash awards of \$250 each will be made annually from funds provided jointly by the Committee Acting for Drug and Related Industries and the American Foundation for Pharmaceutical Education to honor Dr. Edwin Leigh Newcomb. The selections will be made by an Awarding Committee composed of the Chairman of the U.S.P. Subcommittee on Botany and Pharmacognosy, Dr. Heber W. Youngken, Sr.; the Chairman of the National Formulary Subcommittee on Pharmacognosy, Dr. George M. Hocking; and one expert selected by the Executive Director of the Foundation. Dr. Thomas Lewis will serve as the third member of the 1952 Committee. One award will be made from each of the following eligible groups, on a selective basis, from essays or published paper submitted by: undergraduate students in accredited colleges of pharmacy; graduate students in accredited colleges of pharmacy; and teachers, research workers and industrial scientists. It is expected the first three annual awards will be made in the summer of 1952, if meritorious studies in the field of pharmacognosy so justify.

New Books

American Pharmacy, Fundamental Principles and Practices, Pharmaceutical Preparations.—Editor-in-chief, Rufus A. Lyman, M.D., Dean Emeritus, College of Pharmacy, University of Nebraska, Formerly Dean, College of Pharmacy, University of Arizona; Consulting Editor, George Urdang, Ph.G., D.Sc.Nat., Sc.D.(H.C.), Director, American Institute of the History of Pharmacy and Professor of History of Pharmacy, University of Wisconsin; Six Advisory Editors and twenty authors distinguished in their special fields. Third Edition. 1951. 505 pages. 192 graphs and illustrations. The J. B. Lippincott Company. Price \$8.00.

It seems almost superfluous to write a review on a book that has been produced by twenty recognized experts in their special fields who have had the advice and experience of a well selected group of pharmaceutical administrators who directed the general framework of the text. The book is now published in a third edition only five years after its first appearance.

When Dean R. A. Lyman looked around for authors to write a text in pharmacy he had in mind, he wanted representatives of the young generation in American pharmaceutical education to do the job and he certainly knew what he was up to. It meant an open door for new ideas, the use of new themes and ways of teaching, the application of most recent advancements in the general sciences to pharmaceutical thinking. It carried with it the danger of too much of the new and unapproved and too little of the old and still worthwhile and changes in the arrangement and preservation of the subject matter which did not conform to the general ideas of all of the teachers in all of our educational institutions.

Time has confirmed Dean Lyman's optimism. In going through the list of authors, one is impressed with the number of young men who in 1945 still were considered as "promising" but in the meantime have "arrived" and have become deans, thus being in a position to arrange the teaching in their schools according to their personal concepts.

Thoroughly revised and brought abreast of recent developments, the third edition of Volume I of **AMERICAN PHARMACY** will more adequately fill the need for a general pharmacy text, keeping its old friends and making many new ones.—Arthur H. Uhl, University of Wisconsin.

Metabolic Methods, Clinical Procedures in the Study of Metabolic Functions by C. Frank Consolazio, Chief of Biochemistry, United States Army Medical Nutrition Laboratory, Chicago, and Evelyn Marek, M.A., Biochemist in the same Laboratory, and Robert E. Johnson, M.D., Professor and Head of the Department of Physiology, University of Illinois

at Urbana, 1951. 741 pages. 65 charts and illustrations. The C. V. Mosby Company. Price \$6.75.

The book is the result of fifteen years of research on various aspects of mammalian metabolism, particularly that of human beings in health and in disease. It covers metabolic balance studies, routine laboratory analysis of tissues, food, and body fluids and studies out in the field. Only those methods are described in detail which have been used routinely by the authors long enough to classify the precautions essential for success. The authors state that any description of isotopic, ultracentrifuge, and electrophoretic techniques has been omitted intentionally because as yet they are not widely used routinely in metabolic balance studies, but will undoubtedly have to be included in future editions. Each of the eleven sections includes a list of major references. The list in Section X on Statistical Methods will be found especially helpful since statistics have become such an important phase of every scientific study. The text will be of great value to anyone engaged in metabolic studies.—R.A.L.

Essentials of Pharmacology and Materia Medica for Nurses by Albert J. Gilbert, M.D., Instructor of Pharmacology, Aultman School of Nursing, Canton, Ohio, and Selma Moody Browner, R.N., Major, Army Nurse Corps, Walter Reed General Hospital, Washington, D. C. 1951. Third Edition. 343 pages. 20 illustrations. Four plates in color. The C. V. Mosby Company. Price \$3.75.

The text presents the facts and theories of pharmacology for nurses in a clear concise form and adapted to the limited time available in the nursing curriculum. The drugs discussed are limited to the United States Pharmacopoeia, the National Formulary, New and Nonofficial Remedies, and the British Pharmacopoeia. The Third Edition has been revised and enlarged and many of the important new drugs (Aureomycin, chloromycetin, vitamin B12, antihistamines, cortisone, etc.) added. The text is well written and answers the purpose for which it is intended.—R.A.L.

History of Pharmacy in South Carolina by J. Hampton Hoch, D.Sc., Professor of Biology and Pharmacognosy, School of Pharmacy, Medical College of the State of South Carolina. 1951. 87 pages. A contribution through the generosity of the author and the City of Charleston.

This booklet was issued to commemorate the Diamond Jubilee of the South Carolina Pharmaceutical Association (1876-1951). It is a contribution to the history of pharmacy in the individual states. While this was not prepared as part of the series of state histories projected by the American Institute of the History of Pharmacy, the Institute is pleased to be able to make the booklet available to its members through the kindness and generosity of the author and the historic city of Charleston.—R.A.L.

Approved Laboratory Technic by John A. Lomer, M.D., Professor of Medicine, Temple University and Earle H. Spaulding, Ph.D., Professor of Bacteriology and Howard W. Robinson, Ph.D., Professor of Physiological Chemistry, both of Temple University School of Medicine and eighteen collaborators outstanding in their special fields. 1951. Fifth Edition. 1180 pages. 403 illustrations and 28 plates in color. Appleton-Century-Crofts, Inc. Price \$12.

The reputation of this book has been established by the excellence of previous editions; also by the fact that it has become a standard text in clinical and medical technology and each edition has been widely used in hospital, biological, and physicians' personal laboratories. Particular stress is placed upon the importance of using accurately prepared reagents and the proper collection of specimens, since both are essential in obtaining accurate results, irrespective of how carefully directions are followed in carrying out the tests. The present edition has been revised and largely rewritten and the newer tests which have proven reliable have been added. Special attention is directed toward the revision on the section on blood, diagnostic urologic methods, parasitic examinations, and on hemoagglutination and blood grouping. The illustrations are excellent and the color plates are outstanding.—R.A.L.

Introduction to Modern Chemistry by P. C. Gaines, Professor of Chemistry and Laurence O. Binder, Jr., and Ray Woodruff both Associate Professors of Chemistry and all at the Montana State College. 1951. 576 pages. 92 illustrations. The C. V. Mosby Company. Price \$4.75.

The authors' statement concerning their objectives reads as follows: "This text was written over a period of about three years, and tested in the class room, as written, in an effort to provide our own students with the material we felt they needed for a first year course in general chemistry. Because it was intended that the student should use the text as a study aid rather than a reference book, we have omitted much that we consider unnecessary detail or of purely historical interest. We have likewise avoided presenting much material that we, on the basis of more than forty years combined teaching experience, feel belongs to an advanced course."

The reviewer is grateful to these authors for the statement of their objectives for it gives him the opportunity to say something that has been a source of irritation for more than forty years of contact with pharmacy, premedical, dental, liberal arts, and other college students. What he needed was to have some chemist give him some educational support. Now he has it. It has been his observation that so much material is thrown at the student in the beginning courses in chemistry that he cannot possibly digest and assimilate it. The course becomes a mystery course and leads to confusion and discouragement rather

than to clarification, stimulation and inspiration. Too often, also, the teacher of chemistry has taken pride in the number of students he fails, as if that was an indication of a good teacher when in reality it is sure proof of a poor one. The reviewer wishes to commend the authors for their courage in limiting the text to the essentials that will aid the student in grasping those basic principles upon which the science of chemistry rests. It will give the student a firm foundation upon which to build. It takes many courses and a long time to make a chemist. The publishers are also to be commended in taking a chance upon publishing a teaching tool rather than a compendium for beginners.—R.A.L.

The Interests of Pharmacists by Milton Schwebel, New York University, with Foreword by Dr. Donald E. Super, Teachers College, Columbia University. 1951. 84 pages. King's Crown Press. Columbia University. Price \$1.75.

One of the fundamental assumptions of psychologists, counselors and personnel workers has been that men and women who are interested in their work and who have interests like those of others in their vocation, will find satisfaction in their work. As a result, interest inventories have become a principle tool of counselors and personnel workers. In the present study the author has endeavored to show the relationship between inventoried interest and work satisfaction (as distinguished from success or continued employment) and the differentiation of specialties within an occupation. Dr. Schwebel, in this monograph, has contributed significantly to our knowledge of both of these subjects. The study had the endorsement of the deans of the colleges of pharmacy in New York and Dr. Curt P. Wimmer, the late public relations director of the New York State Pharmaceutical Association. Hundreds of pharmacists in New York State and in Connecticut gave their time to provide data for the study and many distinguished investigators, including our own Dr. E. C. Elliott and Dr. H. H. Remmers, gave counsel during the course of the study. Again we can be grateful for a contribution to a study and a contribution to human knowledge where pharmacy was not only the subject of study but a benefactor as well.—R.A.L.

The Edinburgh Dispensatories. Dr. George Urdang has called our attention to a bibliographical paper on "The Edinburgh Dispensatories" in the *Papers of the Bibliographical Society of America*, Vol. 45, First Quarter, 1951, written by David L. Cowen of Rutgers University. We understand that the author has a limited number of reprints for those especially interested.—R.A.L.

Scoville's, The Art of Compounding by Glenn L. Jenkins, Dean School of Pharmacy, Purdue University; Don E. Francke, Chief Pharmacist, University Hospital, University of Michigan; Edward A. Brecht,

Dean School of Pharmacy, University of North Carolina; and Glen J. Sperandio, Assistant Professor of Pharmacy, Purdue University. 1951. Eight Edition. 515 pages. Illustrated. The Blakiston Company. Price \$7.50.

Another famous text which is as familiar to generations of pharmacy students as is the mortar and pestle. Furthermore the reputation of the authors of the eighth edition guarantees the maintaining of the standards of previous editions. The authors, in preparing the present edition, maintained two primary objectives, namely: "first, systematically to present the principles underlying each subject so that the practitioner and student might understand the theories as well as the operations of compounding; second, to so illustrate and detail the principles of prescriptions and exercises as to show their range and variety of application, and to illustrate the practical utility of the principles at the prescription counter." The objectives have been well carried out.—R.A.L.

The Vitamin B Complex by F. A. Robinson, M.Sc. Tech. (Manchester), L.L.B. (London), F.R.I.C. 1951. 688 pages. John Wiley and Sons, Inc. Price \$9.

The book is a critical review of the Vitamin B. complex resulting from a study of all the published literature and the subsequent selection and re-arrangement of the most important facts. The review offers an evaluation of the significance of each vitamin in itself and in relation to each other. It stresses the strong family likeness of the members of the complex, the resemblance of the separate vitamins to one another in their distribution in foodstuffs, in their biological effects on animals, plants, insects and microorganisms and in their biochemical functions. It corroborates the thesis that the basic metabolic processes in which the members of the Vitamin B complex play a part are common to all living organisms from bacteria to man. Extensive literature references for specialists in each field are given. Here are to be found methods of assay for analysis, methods of synthesis for pharmaceutical manufacturers, nature of deficiencies in animals and man for agriculturists and clinicians, and nutrition of micro-organisms for micro-biologists. The coverage and completeness of the text makes it an essential part of every worker's library and laboratory in the field.—R.A.L.

Minnesota

University of Minnesota. College of Pharmacy, Minneapolis. (1901)

C. H. Rogers, Dean

(C. V. Nets, Ole Giavold, W. F. White)

Mississippi

University of Mississippi. School of Pharmacy, Oxford. (1913)

E. L. Hammond, Dean

(E. L. Hammond, A. A. Dodge, J. E. Fogleson, J. L. Voigt)

Missouri

St. Louis College of Pharmacy and Allied Sciences, St. Louis. (1900)

A. F. Schlichting, Dean

(A. F. Schlichting, J. R. Thayer, F. L. Mercer, L. E. Bingenheimer, A. G. Zupko, R. H. Schleif, G. F. Reddish)

University of Kansas City. School of Pharmacy, Kansas City. (1948)

Theodore T. Dittrich, Dean

(Theodore T. Dittrich)

Montana

Montana State University. School of Pharmacy, Missoula. (1917)

J. F. Suchy, Acting Dean

(J. F. Suchy)

Nebraska

The Creighton University. College of Pharmacy, Omaha. (1916)

William A. Jarrett, Dean

(William A. Jarrett, Ann I. Czerwinski, Rev. H. B. Crimmins, S. J.)

University of Nebraska. College of Pharmacy, Lincoln. (1913)

Joseph B. Burt, Dean

(Joseph B. Burt, Laverne D. Small, Harald G. O. Holck, J. E. Dusenberry, R. A. Lyman)

New Jersey

Rutgers University. The State University of New Jersey. New Jersey College of Pharmacy, Newark. (1923)

Roy A. Bowers, Dean

(Roy A. Bowers, Louis Kazin, Pierre Smith, John Cross, Richard Deno)

New York

University of Buffalo. School of Pharmacy, Buffalo. (1939)

A. B. Lemon, Dean

(A. B. Lemon, L. D. Lockie, J. W. Kleber, L. C. Keagle, Elsie Rusch, H. K. Iwamoto, Gretta E. Lemon, J. S. Hill, M. D. Pritchard)

Columbia University. College of Pharmacy of the City of New York. (1939)

Charles W. Ballard, Dean

(C. W. Ballard, E. F. Leallien, Abraham Taub, S. S. Liberman)

Fordham University. College of Pharmacy, New York. (1939)

James H. Kidder, Dean

(J. H. Kidder, Rev. Charles T. Deane, S. J.)

Long Island University, Brooklyn College of Pharmacy, Brooklyn. (1939)

Hugo H. Schaefer, Dean

(Hugo H. Schaefer, Lyman D. Fonda, B. S. Alstadt, S. B. Jeffries, I. Greenberg)

St. John's University. College of Pharmacy, Brooklyn. (1951)

John L. Dandreaux, Dean

(J. L. Dandreaux, H. C. Raubenheimer, A. J. Monte-Bovi, Rev. Cyril F. Meyer, C. M.)

Union University, Albany College of Pharmacy, Albany. (1945)

Francis J. O'Brien, Dean

(Francis J. O'Brien, C. M. Reed, R. H. Denegar)

North Carolina

University of North Carolina. School of Pharmacy, Chapel Hill. (1917)

E. A. Brecht, Dean

(E. A. Brecht, H. O. Thompson)

North Dakota

North Dakota Agricultural College of Pharmacy, Fargo. (1922)

W. F. Sudro, Dean

(W. F. Sudro, C. E. Miller)

Ohio

Ohio Northern University. College of Pharmacy, Ada. (1925)

Albert C. Smith, Acting Dean

(Albert C. Smith, Rudolph H. Raabe)

University of Cincinnati. Cincinnati College of Pharmacy. (1947)

(J. F. Kowalewski, R. B. Kinroos, G. Christensen, C. A. Swisher, J. L. Lichter, E. Lynch)

Ohio State University. College of Pharmacy, Columbus. (1900)

B. V. Christensen, Dean

(B. V. Christensen, John Nelson, Joseph Kern, Arthur Tye, Frank Cosgrove, Earl Guth)

University of Toledo. College of Pharmacy, Toledo. (1941)

Charles H. Larwood, Dean

(Charles H. Larwood)

Oklahoma

Southwestern State College. School of Pharmacy, Weatherford. (1951)

MARRIAGES

Mr. Manfred Holck, Jr. of Austin, and Miss Lois Dell Albers, eldest daughter of Prof. and Mrs. C. C. Albers, University of Texas, in the First English Lutheran Church in Austin on April 15, 1951.

Dr. William O. Foye, assistant professor of synthetic chemistry, University of Wisconsin, School of Pharmacy, and Miss Billie Clark of St. Louis on August 20, 1951.

Prof. Charles A. Reed, University of Illinois, and Miss Lois Ruth Wells of Chicago, at Graham Taylor Chapel of the University of Chicago, on August 18, 1951.

Mr. R. G. McKinley, University of New Mexico and Miss Priscilla Post of Albuquerque on July 7, 1951 at Albuquerque.

- W. D. Strether, Dean
(W. D. Strether)
University of Oklahoma, College of
Pharmacy, Norman. (1905)
Ralph W. Clark, Dean
(Ralph W. Clark)
- Oregon**
Oregon State College, School of Phar-
macy, Corvallis. (1915)
George E. Crossen, Dean
(George E. Crossen)
- Pennsylvania**
Duquesne University, School of Phar-
macy, Pittsburgh. (1927)
Hugh C. Muldoon, Dean
(H. C. Muldoon, J. A. Zapotocky, V.
H. Simonian)
Philadelphia College of Pharmacy and
Science, Philadelphia. (1900)
Ivor Griffith, Dean
(Ivor Griffith, L. F. Tice, J. N. Mc-
Donnell, Arthur Osol, E. F. Cook, G.
Scheidt, P. P. Stroup, Robert
Abrams, J. W. E. Harrison, Eric
Martin, P. C. Olsen)
Temple University, School of Pharma-
cy, Philadelphia. (1928)
Joseph B. Sprowls, Dean
(Joseph B. Sprowls, A. E. James, F.
H. Eby, J. C. Munch)
University of Pittsburgh, School of
Pharmacy, Pittsburgh. (1900)
Edward C. Reif, Dean
(Edward C. Reif, Stephen Wilson, E.
P. Claus, George Hook, Joseph McEl-
villa, George D. Beal)
- Philippines**
University of the Philippines, College
of Pharmacy, Quezon City. (1917)
Patrocinio Valenzuela, Dean
(Jesusa A. Concha)
- Puerto Rico**
University of Puerto Rico, College of
Pharmacy, Rio Piedras. (1926)
Luis Torres-Diaz, Dean
- Rhode Island**
Rhode Island College of Pharmacy and
Allied Sciences, Providence. (1916)
W. Henry Rivard, Dean
(W. Henry Rivard, R. E. Brillhart)
- South Carolina**
Medical College of the State of South
Carolina, Charleston. (1940)
William A. Prout, Dean
(William A. Prout, J. Hampton Hoch)
University of South Carolina, School
of Pharmacy, Columbia. (1928)
E. T. Motley, Dean
(E. T. Motley, R. C. Stokes)
- South Dakota**
South Dakota State College, Division
of Pharmacy, Brookings. (1908)
Floyd J. LeBlanc, Dean
(Floyd J. LeBlanc)
- Tennessee**
University of Tennessee, School of
Pharmacy, Memphis. (1914)
Robert L. Crowe, Dean
(Robert L. Crowe)
- Texas**
University of Texas, College of Phar-
macy, Austin. (1926)
Henry M. Burlage, Dean
(Henry M. Burlage, C. O. Wilson, W.
R. Lloyd, R. F. Doerge)
- Utah**
University of Utah, College of Phar-
macy, Salt Lake City. (1951)
L. David Hiner, Dean
(L. David Hiner, George E. Osborne)
- Virginia**
Medical College of Virginia, School of
Pharmacy, Richmond. (1908)
R. Blackwell Smith, Dean
(R. B. Smith, M. L. Neuroth, J. C.
Nottingham, W. E. Weaver, John
Boenigk)
- Washington**
State College of Washington, School of
Pharmacy, Pullman. (1912)
P. H. Diratine, Dean
(P. H. Diratine)
University of Washington, College of
Pharmacy, Seattle. (1905)
Forest L. Goodrich, Dean
(F. L. Goodrich, L. W. Rising, E. M.
Flein, H. W. Youngken, Jr.)
- West Virginia**
West Virginia University, College of
Pharmacy, Morgantown. (1929)
J. Lester Hayman, Dean
(J. Lester Hayman, G. A. Berry)
- Wisconsin**
University of Wisconsin, School of
Pharmacy, Madison. (1900)
Arthur H. Uhl, Dean
(Arthur H. Uhl, George Urdang, L.
M. Parks, M. W. Green, D. E. War-
ster, W. S. Apple, G. L. Sonnedecker,
J. V. Swintsky, L. W. Bussse, Takara
Higuchi)
- Wyoming**
University of Wyoming, College of
Pharmacy, Laramie. (1951)
David W. O'Day, Dean
(David W. O'Day)

**Names in parenthesis were representatives at the 1951 meeting

NON-MEMBERS ATTENDING BUFFALO MEETING

- Alabama**
Howard College, Division of Pharmacy,
Birmingham
C. Lee Huyck, Director
(C. Lee Huyck)
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University of Arizona, College of Phar-
macy, Tucson.
Haakon Bang, Dean
(Haakon Bang, Willis R. Brewer, Al-
bert Picchioni, Newell Stewart)
- Texas**
Texas Southern University, College of
Pharmacy, Houston.
Hurd M. Jones, Dean
(Hurd M. Jones, P. V. Hammonds)
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To meet the demonstrated need for trained teachers and researchers in the field of pharmacy, the American Foundation for Pharmaceutical Education announces a limited number of Fellowships for students seeking graduate degrees in pharmaceutical subjects.

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